Database: Embase <1974 to 2017 June 1>, OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present, EBM Reviews - Cochrane Central Register of Controlled Trials <April 2017>, EBM Reviews - Cochrane Database of Systematic Reviews <2005 to May 24, 2017>

Search Strategy:
--------------------------------------------------------------------------------
1 exp kidney transplantation/ (226588)
2 ((renal or kidney*) adj5 (transplantat* or allotransplant* or grafting or homotransplant* or retransplant*)).tw,kw. (130834)
3 1 or 2 (249970)
4 (exp nephrectomy/ or nephrectom*.tw,kw.) and (exp living donor/ or exp Living Donors/ or exp kidney donor/ or donor*.tw.) (9033)
5 ((Natural orifice adj5 endoscopic) or "NOTES").tw. (90516)
6 exp natural orifice transluminal endoscopic surgery/ or exp Natural Orifice Endoscopic Surgery/ (4310)
7 "SILS".tw. (3018)
8 laparoscopic surgery/ or laparoscop*.tw. (300592)
9 needlescop*.tw. (604)
10 (robotic adj5 assisted).tw. (11158)
11 (transvaginal or trans vaginal single port or clips or Endo GIA*).tw. (48568)
12 (Organ adj3 Retriev*).tw. (1217)
13 or/4-12 (440656)
14 3 and 13 (8213)
15 exp renal artery/ and (exp artery anastomosis/ or exp Anastomosis, Surgical/) (638)
16 ((arteri* or ureter*) adj5 anastomosis).tw,kw. (8673)
17 ((renal* or kidney*) and vein* and extension).tw,kw. (1281)
18 Renal Veins/ and extension.tw. (539)
19 (((left and right) or dual) adj5 kidney*).tw. (10230)
20 (warm adj5 (ischaem* or ischem*)).tw,kw. (13333)
21 (ureter* adj5 stent*).tw,kw. (10544)
22 ureter/ and stentl (2531)
23 ((bladder or foley) adj5 catheter*).tw,kw. (15681)
24 exp blood vessel graft/ (196680)
25 ((vascular or blood vessel) adj5 (graft* or transposition)).tw,kw. (17717)
26 exp anticoagulant agent/ or exp Anticoagulants/ (791731)
27 (anti coagulant* or anti coagulat* or anticoagulant* or anticoagulat* or antithrombotic* or thrombin inhibitor*).tw,kw. (238803)
28 or/15-27 (1119967)
29 3 and 28 (12973)
30 14 or 29 (19532)
31 limit 30 to yr="2007 -Current" (10683)
32 limit 31 to english language [Limit not valid in CDSR; records were retained] (10133)
33 ((exp animals/ or exp animal/ or exp nonhuman/ or exp animal experiment/ or animal model/
or animal tissue/ or non human/) not (humans/ or human/)) or ((rats or mice or mouse or cats or
dogs or animal* or cell lines) not (human* or men or women)).ti. (11025686)
34 32 not 33 (9352)
35 ((child/ or Pediatrics/ or Adolescent/ or Infant/ or adolescence/ or newborn/) not (adult/ or-aged/)) or ((baby or babies or child or children or pediatric* or paediatric* or peadiatric* or infant*or infancy or neonat* or new born* or kid or kids or adolescen* or preschool or pre-school or toddler*) not (aged or adult* or elder* or senior or men or women)).ti. (4317025)
36 34 not 35 (8723)
37 conference abstract.pt. or Congresses as Topic/ (2673433)
38 36 not 37 (6095)
39 case report/ or case reports/ or case report.ti. (4145467)
40 38 not 39 (4785)
41 note/ or editorial/ or letter/ or Comment/ or news/ (3888419)
42 40 not 41 (4447)
43 ((pancrease-kidney or liver-kidney) not ("without" or "not" or "non" or exclud*)).ti. (2335)
44 42 not 43 (4442)
45 remove duplicates from 44 (3108)
46 limit 45 to ed=20160222-20170602 use ppez [Limit not valid in Embase,CCTR,CDSR;
records were retained] (86)
47 limit 45 to dd=20160222-20170602 use oemezd [Limit not valid in Ovid MEDLINE(R),Ovid
MEDLINE(R) Daily Update,Ovid MEDLINE(R) In-Process,Ovid MEDLINE(R)
Publisher,CCTR,CDSR; records were retained] (259)
48 (2016* or 2017*).dc. or 2017*.ep. (4593426)
49 45 and 48 (489)
50 limit 45 to yr="2016 -Current" use ctr (13)
51 limit 45 to yr="2016 -Current" use coch (18)
52 46 or 47 or 49 or 50 or 51 (562)

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1. Prophylactic Ureteric Stents in Renal Transplant Recipients: a Multicenter Randomized Controlled Trial of Early Versus Late Removal


EBM Reviews - Cochrane Central Register of Controlled Trials
[Journal: Article In Press]
AN: CN-01337493  NEW

Prophylactic ureteric stenting in renal transplantation reduces major urological complications; however, morbidity is related to the indwelling duration of a stent. We aimed to determine the optimal duration for stents in this clinical setting. Patients (aged 2-75 years) from six UK hospitals who were undergoing renal transplantation were recruited and randomly assigned to either early stent removal at 5 days (without cystoscopy) or late removal at 6 weeks after transplantation (with cystoscopy). The primary outcome was a composite of stent-related complications defined as pain, visible hematuria, migration, fragmentation, and urinary tract infections (UTIs) within 3 mo of transplantation. Between May 2010 and Nov 2013, we randomly assigned 227 participants, with 205 included in the final analysis of the primary outcome. Stent-related complications were significantly higher in the late versus early stent removal groups (36 of 126 [28.6%] vs. 6 of 79 [7.6%]; p < 0.001). The majority of stent complications consisted of UTIs, with an incidence of 31 of 126 (24.6%) in the late group compared with 6 of 79 (7.6%) in the early group (p = 0.004). We found early stent removal on day 5 significantly reduced stent-related complications and improved quality of life in the first 3 mo after transplantation (ISRCTN09184595). Copyright (C) 2017 The American Society of Transplantation and the American Society of Transplant Surgeons.

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Publisher
Blackwell Publishing Ltd (E-mail: customerservices@oxonblackwellpublishing.com)
2.
Living donor kidney transplantation in the hemodialysis-naive and the hemodialysis-exposed: a short term prospective comparative study
Gadelkareem RA, Hameed DA, Moeen AM, El-Araby AM, Mahmoud MA, El-Taher AM, El-Haggagy AA, Ramzy MF

EBM Reviews - Cochrane Central Register of Controlled Trials

[Introduction] Preemptive (P) living donor kidney transplantation (LDKT) provides better survival rates, quality of life and economic saving. However, the extent of these advantages over those with a short period of pre-LDKT dialysis is not known. Objectives Evaluation of the patients' characteristics and short-term outcomes of PLDKT and LDKT after a pre-transplant period of hemodialysis (HD) not >6 months. Patient and methods This study was conducted between June 2010 and June 2012 and included two groups. Group-I included recipients without HD before operation. Group-II included those who had a period of HD <6 months. Recipients and donors were evaluated according to the classic work up. Follow-up for 12 months was scheduled. Results Group-I included 30 recipients and group-II included 15 recipients. Demographic and clinical characteristics were similar except for mean recipient age (44 versus 34.3 years; p = 0.024), recipient donor age difference (p = 0.03), job categories (p = 0.047) and ABO distribution (p = 0.01). Cumulative graft (0.88 versus 0.93) and recipient (0.92 versus 0.100) survival rates were non-significantly different. Graft function and mean serum creatinine level were within normal up to 12 months. Acute graft rejection (AGR) was significantly higher in group-II (16.7% versus 46.7%; p = 0.03). However, lymphoceles were significantly more common in group-I (40% versus 6.7%; p = 0.02). There was no delayed graft function (DGF), major urinary or vascular complications. Conclusion PLDKT has a lower rate of AGR. Despite it has a higher rate of lymphoceles, it saves the patient the morbidities of vascular access and inconveniences of HD. Hence, PLDKT is recommended as the first choice for each KT-candidate. Copyright (C) 2016 Pan African Urological Surgeons' Association
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Publisher
Pan African Urological Surgeons Association(PAUSA) (E-mail: sunnydoodu@yahoo.com)
3. Predictive model of 1-year postoperative renal function after living donor nephrectomy

EBM Reviews - Cochrane Central Register of Controlled Trials
[Journal: Article In Press]

AN: CN-01341738  NEW

Objective: Kidney transplantation from a living donor nephrectomy (LDN) is the best treatment for end-stage renal disease, but decrease in donor renal function is often revealed. The aim of this study was to evaluate the association between preoperative factors and postoperative estimated glomerular filtration rate (eGFR) and test a predictive model to estimate postoperative eGFR, 1 year after LDN.

Patients and methods: We reviewed 226 records of consecutive patients who underwent laparoscopic live donor nephrectomy between 2006 and 2014 in a single tertiary center. Of these, complete data on 202 patients were analyzed. A training (2/3 of the whole population) and a validation set (1/3) were randomized. A multivariate regression model was used to identify predictors and a formula to estimate of 1-year postoperative eGFR in the training set, using the CKD-EPI formula. Then, the formula was subjected to internal validation using the validation set using receiver operating characteristic (ROC) curves.

Results: Two hundred and two LLDD were evaluated with a mean preoperative eGFR of 94.1 +/- 15.5 ml/min/1.73 m<sup>2</sup> and postoperative eGFR of 64.6 +/- 14.5 ml/min/1.73 m<sup>2</sup> (p < 0.0001). In multivariable analysis, age and preoperative eGFR were independent predictors of postoperative eGFR in the training set. A formula to estimate postoperative eGFR was generated with Pearson r = 0.70 in the training cohort and 0.65 in the validation cohort (both p < 0.0001). Area under the ROC curve of the formula was 0.89 in the training cohort and 0.83 in the validation cohort (both p < 0.0001).

Conclusions: Preoperative eGFR and age are predictors of postoperative eGFR after LDN. The internally validated predictive model of postoperative eGFR developed could be an accurate tool to improve the selection of LDN candidates. Copyright (C) 2017 Springer Science+Business Media Dordrecht
Randomized trial of rATg/Daclizumab vs. rATg/Alemtuzumab as dual induction therapy in renal transplantation: results at 8 years of follow-up


EBM Reviews - Cochrane Central Register of Controlled Trials


[Journal: Article]

AN: CN-01330158  NEW

Our goal in using dual induction therapy is to bring the kidney transplant recipient closer (through more effectively timed lymphodepletion) to an optimally immunosuppressed state. Here, we report long-term results of a prospective randomized trial comparing (Group I,N = 100) rATG/Dac (3 rATG, 2 Dac doses) vs. (Group II,N = 100) rATG/Alemtuzumab(C1H) (1 dose each), using reduced tacrolimus dosing, EC-MPS, and early corticosteroid withdrawal. Lower EC-MPS dosing was targeted in Group II to avoid severe leukopenia. Median follow-up was 96 mo post-transplant. There were no differences in 1st BPAR (including borderline) rates: 10/100 vs. 9/100 in Groups I and II during the first 12mo(P = 0.54), and 20/100 vs. 20/100 throughout the study(P = 0.90). Equally favorable renal function was maintained in both treatment arms(N.S.). While not significant, more patients in Group II experienced graft loss, 25/100 vs. 18/100 in Group I(P = 0.23). Actuarial patient/graft survival at 96 mo was 92%/83% vs. 85%/73% in Groups I and II(N.S.). DWFG-due-to-infection(N.S.), EC-MPS withholding-due-to-leukopenia during the first 2mo(P = 0.03), and incidence of viral infections(P = 0.09) were higher in Group II, whereas EC-MPS withholding-due-to-GI symptoms was higher in Group I(P = 0.009). No other adverse event differences were observed. While long-term anti-rejection and renal function efficacy were demonstrated in both treatment arms, slight over-immunosuppression of Group II patients occurred. Copyright (C) 2016 Elsevier B.V.
A comparison of the effects of oral vs. intravenous hydration on subclinical acute kidney injury in living kidney donors: a protocol of a randomised controlled trial
Mackinnon S, Aitken E, Ghita R, Clancy M
EBM Reviews - Cochrane Central Register of Controlled Trials
[Journal: Article]
AN: CN-01332769 NEW

Background: Optimal treatment for established renal failure is living donor kidney transplantation. However this pathway exposes healthy individuals to significant reduction in nephron mass via major surgical procedure. Laparoscopic donor nephrectomy is now the most common method for live donor transplantation, reducing both donor post-operative pain and recovery time. However this procedure exposes kidneys to additional haemodynamic stresses. It has been suggested that donor hydration - particularly the use of preoperative intravenous fluids - may counteract these stresses, reducing subclinical acute kidney injury and ultimately improving long-term renal function. This may be important in both preservation of donor renal function and recipient graft longevity. Methods/Design: A prospective single-centre single-blinded randomized controlled trial will be carried out to determine the effects of donor preoperative intravenous fluids. The primary outcome is donor subclinical acute kidney injury (defined as plasma NGAL, >153 ng/ml) on day 1 postoperatively. Secondary outcomes include intraoperative haemodynamics, recipient subclinical acute kidney injury, perioperative complications and donor sleep quality. Donors will be randomised into two groups: the intervention group will receive active pre-hydration consisting of three litres of intravenous Hartmann’s solution between midnight and 8 am before morning kidney donation, while the control group will not receive this. Both groups will receive unlimited oral fluids until midnight, as is routine. Plasma NGAL will be measured at pre-specified perioperative time points, intraoperative haemodynamic data will be collected using non-invasive cardiac output monitoring and clinical notes will be used to obtain demographic and clinical data. The researcher will be blinded to the donor fluid hydration status. Blinded statistical analysis will be performed on an intention-to-treat basis. A prospective power calculation estimates a required sample size of 86 patients. Discussion: This study will provide important data, as there is currently little evidence about the use of donor preoperative fluids in laparoscopic nephrectomy. It
is hoped that the results obtained will guide future clinical practice. Trial registration: This study has been approved by the West of Scotland Research Ethics Committee 3 (reference no. 14/WS/1160, 27 January 2015) and is registered with the International Standard Randomised Controlled Trial Number Register (reference no. ISRCTN10199225, 20 April 2015). Copyright (C) 2017 The Author(s).

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Publisher
BioMed Central Ltd. (E-mail: info@biomedcentral.com)

6.
Dual Kidney Transplant Techniques: A Systematic Review.
Cocco A; Shahrestani S; Cocco N; Hameed A; Yuen L; Ryan B; Hawthorne W; Lam V; Pleass H.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Clinical Transplantation. , 2017 May 23.
[Journal Article]
UI: 28544075

BACKGROUND: Dual kidney transplantation (DKT) was developed in order to improve outcomes from transplantation of extended criteria donors (ECD). This paper examined which surgical techniques have been reported for DKT, and whether any technique had superior patient and graft survival.

METHOD: Electronic databases were searched for published studies mapping to MESH terms: "kidney or renal" AND "transplan*" AND "dual or double". Single case reports; studies of patients less than 18 years old; studies which did not describe the surgical technique; and studies that did not report patient or graft survival were excluded.

RESULTS: Fifteen reports of 434 DKT recipients were identified. Three techniques were described: bilateral placement; unilateral placement with separate anastomoses; and unilateral placement with patch anastomoses. Patient survival across all three techniques was over 95% at one year, and graft survival was also similar at over 90%. Rates of delayed graft function were between 20 and 30% across all techniques.
CONCLUSION: The three techniques have equivalent delayed graft function as well as patient and graft survival rates. This is an encouraging result as it means that the surgeon can choose to use the technique which is most appropriate for their own skills and for the patient. This article is protected by copyright. All rights reserved.

7.
Drug Library Screening for the Identification of Ionophores That Correct the Mistrafficking Disorder Associated with Oxalosis Kidney Disease.
Hou S; Madoux F; Scampavia L; Janovick JA; Conn PM; Spicer TP.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
SLAS discovery. 2472555217689992, 2017 Jan 01.
[Journal Article]
UI: 28346094
Primary hyperoxaluria is the underlying cause of oxalosis and is a life-threatening autosomal recessive disease, for which treatment may require dialysis or dual liver-kidney transplantation. The most common primary hyperoxaluria type 1 (PH1) is caused by genetic mutations of a liver-specific enzyme alanine:glyoxylate aminotransferase (AGT), which results in the misrouting of AGT from the peroxisomes to the mitochondria. Pharmacoperones are small molecules with the ability to modify misfolded proteins and route them correctly within the cells, which may present an effective strategy to treat AGT misrouting in PH1 disorders. We miniaturized a cell-based high-content assay into 1536-well plate format and screened ~4200 pharmacologically relevant compounds including Food and Drug Administration, European Union, and Japanese-approved drugs. This assay employs CHO cells stably expressing AGT-170, a mutant that predominantly resides in the mitochondria, where we monitor for its relocation to the peroxisomes through automated image acquisition and analysis. The miniaturized 1536-well assay yielded a Z' averaging 0.70 +/- 0.07. Three drugs were identified as potential pharmacoperones from this pilot screen, demonstrating the applicability of this assay for large-scale high-throughput screening.
Evolution of Technique in Laparoscopic Donor Nephrectomy: A Single Center Experience.
Cintorino D; Pagano D; Bonsignore P; di Francesco F; Li Petri S; Ricotta C; Gruttadauria S.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 28504556
BACKGROUND: Renal transplantation is the most successful therapy for improving survival and quality of life for end-stage renal disease (ESRD). Living donor kidney transplantation (LDKTx) has been used as an alternative to reduce the stay on the waiting list of patients with ESRD. Laparoscopic donor nephrectomy (LDN) has become the standard procedure for LDKTx.
OBJECTIVE: This study aims to describe evolution of surgical technique with LDN at our institute.
MATERIALS AND METHODS: We retrospectively analyzed our experience with LDN performed from January, 2003 to November, 2016, focusing on describing modifications of the surgical technique and devices made during those years. Demographics, operative factors, and postoperative complications of donors were reviewed.
RESULTS: From the beginning of our experience with LDKTx we have performed 185 cases. From 2003 to 2016, 144 LDN were performed. Modifying our technique in response to the learning curve, complications encountered, and technological advancements, we experienced low complication rates.
CONCLUSIONS: Continual refinement with LDN techniques based on intraoperative observations and technological advances is necessary to keep complication rates low and reduce donor morbidity and time for recovery.
Status
Publisher
Authors Full Name
Cintorino, Davide; Pagano, Duilio; Bonsignore, Pasquale; di Francesco, Fabrizio; Li Petri, Sergio; Ricotta, Calogero; Gruttadauria, Salvatore.
Institution
Cintorino, Davide. Department for the Treatment and Study of Abdominal Diseases and Abdominal Transplantation, IRCCS-ISMETT (Istituto Mediterraneo per i Trapianti e Terapie ad
9.
A model of acute renal allograft rejection in outbred Yorkshire piglets.
Lassiter R; Wang Y; Fang X; Winn M; Ghaffari A; Ho CS; Helman S; Jajosky R; Kleven D; Stanley Nahman N Jr; Merchen TD.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Transplant Immunology., 2017 May 08.
[Journal Article]
UI: 28495618
Pigs represent a desirable animal model for the study of rejection in kidney transplantation with inbred Yucatan miniature swine (YMS) the most commonly studied strain due to well defined swine leukocyte antigen (SLA) genotypes. However, limitations to YMS may include cost and availability. Outbred Yorkshire pigs are widely available and significantly cheaper than YMS. Recent advances in SLA genotyping have allowed its application to outbred strains. On this basis, we theorized that Yorkshire pigs would be a viable alternative to YMS for the study of rejection in kidney transplantation. To address this question, we performed auto (Auto) and allotransplants (Allo) in 24 Yorkshire pigs, and assessed SLA genotypes and acute rejection after 72h. At sacrifice, and when compared to autotransplants, allotransplants had significant elevations in serum creatinine (8.4+/-1.3 vs 2.8+/-2.0mg/dL for Allo vs autotransplants, respectively) and BUN (61+/9 vs 19.2+/-15mg/dL for Allo vs autotransplants, respectively). Warm ischemia times between the two groups did not differ (24+/2.3 vs 26.4+/1.4min for Auto vs Allo, respectively). There were 16 distinct SLA haplotypes identified from pigs undergoing allotransplantation, no matched donor-recipient pairs, and all allografts demonstrated rejection. Type IIA cellular rejection (Banff) was the most common. One allograft demonstrated hyperacute rejection due a blood group incompatibility. Histologically, the expression of regulatory T cells and dendritic cells was increased in allografts. These data suggest that Yorkshire pigs may be a useful model for the study of acute rejection in experimental kidney transplantation.

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Status
Publisher
Authors Full Name
Lassiter, Randi; Wang, Youli; Fang, Xuexiu; Winn, Matt; Ghaffari, Arina; Ho, Chak-Sum; Helman, Sandra; Jajosky, Ryan; Kleven, Daniel; Stanley Nahman, N Jr; Merchen, Todd D.
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Ghaffari, Arina. Department of Surgery, Medical College of Georgia at Augusta University, Augusta, GA, United States.
Ho, Chak-Sum. Gift of Life Michigan, Ann Arbor, MI, United States.
Helman, Sandra. Department of Pathology, Medical College of Georgia at Augusta University, Augusta, GA, United States.
10.
Bariatric Surgery as a Bridge to Renal Transplantation in Patients with End-Stage Renal Disease.
Al-Bahri S; Fakhry TK; Gonzalvo JP; Murr MM.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 28500419
BACKGROUND: Obesity is a relative contraindication to organ transplantation. Preliminary reports suggest that bariatric surgery may be used as a bridge to transplantation in patients who are not eligible for transplantation because of morbid obesity.
SETTING: The Bariatric Center at Tampa General Hospital, University of South Florida, Tampa, Florida.
METHODS: We reviewed the outcomes of 16 consecutive patients on hemodialysis for end-stage renal disease (ESRD) who underwent bariatric surgery from 1998 to 2016. Demographics, comorbidities, weight loss, as well as transplant status were reported. Data is mean +/- SD.
RESULTS: Six men and ten women aged 43-66 years (median = 54 years) underwent laparoscopic Roux-en-Y gastric bypass (LRYGB, n = 12), laparoscopic adjustable gastric banding (LAGB, n = 3), or laparoscopic sleeve gastrectomy (LSG, n = 1). Preoperative BMI was 48 +/- 8
kg/m2. Follow-up to date was 1-10 years (median = 2.8 years); postoperative BMI was 31 +/- 7 kg/m2; %EBWL was 62 +/- 24. Four patients underwent renal transplantation (25%) between 2.5-5 years after bariatric surgery. Five patients are currently listed for transplantation. Five patients were not listed for transplantation due to persistent comorbidities; two of these patients died as a consequence of their comorbidities (12.5%) more than 1 year after bariatric surgery. Two patients were lost to follow-up (12.5%).

CONCLUSION: Bariatric surgery is effective in patients with ESRD and improves access to renal transplantation. Bariatric surgery offers a safe approach to weight loss and improvement in comorbidities in the majority of patients. Referrals of transplant candidates with obesity for bariatric surgery should be considered early in the course of ESRD.

11. Hypertension in kidney transplantation is associated with an early renal nerve sprouting. Mauriello A; Rovella V; Borri F; Anemona L; Giannini E; Giacobbi E; Saggini A; Palmieri G; Anselmo A; Bove P; Melino G; Valentina G; Tesauro M; Gabriele D; Di Daniele N.
Background: Normalization of arterial pressure occurs in just a few patients with hypertensive chronic kidney disease undergoing kidney transplantation. Hypertension in kidney transplant recipients may be related to multiple factors. We aimed to assess whether hypertension in kidney-transplanted patients may be linked to reinnervation of renal arteries of the transplanted kidney.

Methods: We investigated renal arteries innervation from native and transplanted kidneys in three patients 5 months, 2 years and 11 years after transplantation, respectively. Four transplanted kidneys from non-hypertensive patients on immunosuppressive treatment without evidence of hypertensive arteriolar damage were used as controls.

Results: Evidence of nerve sprouting was observed as early as 5 months following transplantation, probably originated from ganglia of recipient patient located near the arterial anastomosis and was associated with mild hypertensive arteriolar damage. Regeneration of periadventitial nerves was already complete 2 years after transplantation. Nerve density tended to reach values observed in native kidney arteries and was associated with hypertension-related arteriolar lesions in transplanted kidneys. Control kidneys, albeit on an immunosuppressive regimen, presented only a modest regeneration of sympathetic nerves.

Conclusions: Our results suggest that the considerable increase in sympathetic nerves, as found in patients with severe arterial damage, may be correlated to hypertension rather than to immunosuppressive therapy, thus providing a morphological basis for hypertension recurrence despite renal denervation.

Status Publisher
Authors Full Name
Mauriello, Alessandro; Rovella, Valentina; Borri, Filippo; Anemona, Lucia; Giannini, Elena; Giacobbi, Erica; Saggini, Andrea; Palmieri, Giampiero; Anselmo, Alessandro; Bove, Pierluigi; Melino, Gerry; Valentina, Guardini; Tesauro, Manfredi; Gabriele, D'Urso; Di Daniele, Nicola.
Institution
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Giannini, Elena. Anatomic Pathology, Department of Experimental Medicine and Surgery, Tor Vergata University, Rome, Italy.
Giacobbi, Erica. Anatomic Pathology, Department of Experimental Medicine and Surgery, Tor Vergata University, Rome, Italy.
Saggini, Andrea. Anatomic Pathology, Department of Experimental Medicine and Surgery, Tor Vergata University, Rome, Italy.
Palmieri, Giampiero. Anatomic Pathology, Department of Experimental Medicine and Surgery, Tor Vergata University, Rome, Italy.
Anselmo, Alessandro. Transplantation Surgery, Department of Surgery Policlinico Tor Vergata Foundation, Rome, Italy.
Bove, Pierluigi. Urology, Department of Experimental Medicine and Surgery, Rome, Italy.
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Di Daniele, Nicola. Hypertension and Nephrology Unit, Department of Systems Medicine, Tor Vergata University, Rome, Italy.

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20170512
Year of Publication
2017

12.
Renal arterial mycotic aneurysm after kidney transplantation.
Lazareth H; Burbach M; Gosset C; Lefaucheur C; Pashootan P; Zagdanski AM; Denis B.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Mycotic aneurysm is a rare condition mostly attributable to Candida or Aspergillus species. About 20 cases of Candida-related arteritis have been reported in kidney transplant patients. Herein, we report the case of a 40-year-old man who received a kidney from a deceased donor in whom an accidental digestive wound was made during organ retrieval. He presented with sudden anuria 47 days after renal transplantation revealing a large mycotic aneurysm of the kidney graft renal artery. Organs derived from donors in whom a digestive breach is noticed should be used with caution.

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13.
Prognostic value of aortoiliac calcification score in Kidney transplantation recipients.
Chavent B; Maillard N; Boutet C; Albertini JN; Duprey A; Favre JP.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 28479451
BACKGROUND: Kidney recipients are increasingly older with arterial disease and extended arterial calcifications. In a kidney transplantation population, the prognosis value of aortic and iliac calcifications remains poorly explored. We aimed to assess the impact of pre-transplantation Aortoiliac vascular calcifications on patients, grafts survival and cardiovascular events.
METHODS: This retrospective study included kidney transplantation patients from 2006 to 2012 for whom we had available pre-surgery abdominal computed tomography results (n=100). We designed a score to quantify Aortoiliac calcifications. Primary endpoints were patient and graft survival. Secondary endpoints were renal function and cardiovascular morbidity. Predictive performances of calcification score were assessed using area under Receiver-Operating Characteristic Curves. Patients were classified in quartiles depending on Global Calcium Score value.
RESULTS: The cumulated rate of death and graft loss was 13% with no significant differences for survival between quartiles. No significant difference was observed in renal function (p=0.4). Seventeen cardiovascular events were registered with a significant correlation between calcium score elevation and need of cardiovascular surgery during the follow-up (p=0.01). Global calcium score had a predictive value of 74.5% (95%CI 0.62, 0.87) with 71% sensitivity and 73% specificity.
CONCLUSION: Aortoiliac calcifications do not decrease patient and graft survival. High calcium score predict cardiovascular events and procedures during the follow-up.
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Diwan TS; Lichvar AB; Leino AD; Vinks AA; Christians U; Shields AR; Cardi MA; Fukuda T; Mizuno T; Kaiser T; Woodle ES; Alloway RR.

BACKGROUND: Severe obesity has been shown to limit access to renal transplantation in patients with end-stage renal disease (ESRD). Laparoscopic sleeve gastrectomy (LSG) has been performed in the ESRD population to assist in achieving waitlist and transplant eligibility. Little is known about how LSG impacts the bioequivalence of tacrolimus products and immunosuppression pharmacokinetics.

METHODS: This was a prospective, open-label, single-dose, crossover, two-period pharmacokinetic (PK) study. The purpose of this study was to assess single-dose PK of
immediate-release tacrolimus (IR-TAC), extended-release tacrolimus (ER-TAC), and mycophenolic acid (MPA) in adult ESRD patients post-LSG.

RESULTS: Twenty-three subjects were included in the 24-hour PK assessments. The ratio of geometric means between ER-TAC and IR-TAC was 103.5% (90% CI; 89.6%-119.6%) for AUC0-24 and 92.5% (90% CI; 80.4%-106.4%) for Cmax. PK parameters were similar between ER-TAC and IR-TAC, except for Cmin (P=.004) and Cmax (P=.04). MPA AUC0-24 was similar when given with either ER-TAC or IR-TAC (P=.32). Patients expressing CYP3A5*1 genotypes had lower tacrolimus AUC0-24 values vs those with CYP3A5*3/*3 (IR-TACP<.001; ER-TACP=.008). Genotype did not impact MPA PK.

CONCLUSION: Dose modification of immunosuppressants post-LSG may not be necessary aside from standard therapeutic drug monitoring.

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15.
Pasteurella aerogenes as an Asymptomatic Bacteriuria Agent.
Alaygut D; Engin A.
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[Journal Article]
UI: 28444291
'Asymptomatic bacteriuria' (ASB) is isolation of a specified quantitative count of bacteria in an appropriately collected urine specimen obtained from a person without symptoms or signs referable to urinary infection. Catheterized specimens are less likely to be contaminated compared with voided specimens; therefore, positive cultures of catheterized specimens are more likely to reflect true bladder bacteriuria even with low colony counts. The common pathogens for ASB are Escherichia coli, Klebsiella and Streptococcus spp. Pasteurella spp. was not previously reported as an ASB agent. ASB is important for pregnant women, children, individuals with obstructive uropathy, chronic renal failure and neutropenia, before the urologic procedures and after renal transplantation. Treatment of ASB is required for above situations. We report an 11-year-old-girl with neurogenic bladder who made clean intermittent catheterization and had Pasteurella aerogenes as an ASB agent.
Complement inhibition with eculizumab for thrombotic microangiopathy rescues a living-donor kidney transplant in a patient with antiphospholipid antibody syndrome.

Geethakumari PR; Mille P; Gulati R; Nagalla S.

Antiphospholipid antibody syndrome (APS) is an enigmatic heterogeneous disorder despite several revelations in its pathobiology. Renal transplantation in patients with APS has been notoriously difficult due to the high risk of development of thrombotic microangiopathy (TMA), which is often refractory to conventional treatment modalities such as aggressive anticoagulation and plasmapheresis. We describe a case of a 58-year-old male with secondary APS undergoing living unrelated renal transplantation for end-stage renal disease from lupus nephritis. Shortly after transplantation, he developed graft dysfunction from APS related TMA that was refractory to systemic anticoagulation and plasmapheresis. After becoming hemodialysis dependent, the patient was started on eculizumab, a humanized monoclonal antibody against complement factor
5, as salvage therapy. We show that this intervention successfully rescued his renal allograft and that the patient has remained dialysis free for over 20 months. Our experience adds to the limited body of literature suggesting the role of complement inhibition in facilitating renal transplantation in patients with APS spectrum of disorders, thus adding a new tool to the therapeutic armamentarium for this difficult disease. The optimal treatment schedule and long term safety data for eculizumab in complement mediated TMA is still unclear. The search for an optimal biomarker to help guide treatment duration is an area of active research.

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17.
Manook M; Kwun J; Burghuber C; Samy K; Mulvihill M; Yoon J; Xu H; MacDonald AL; Freischlag K; Curfman V; Branum E; Howell D; Farris AB; Smith RA; Sacks S; Dorling A; Mamode N; Knechtle SJ.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Early activation of coagulation is an important factor in the initiation of innate immunity, as characterized by thrombotic microangiopathy (TMA). In transplantation, systemic anticoagulation is difficult due to bleeding. A novel "cytotopic" agent, thrombalexin (TLN), combines a cell-membrane-bound (myristoyl tail) anti-thrombin (hirudin-like peptide [HLL]), which can be perfused directly to the donor organ or cells. Thromboelastography was used to measure time to clot formation (r-time) in both rhesus and human blood, comparing TLN versus HLL (without cytotopic tail) versus negative control. Both TLN- and HLL-treated rhesus or human whole blood result in significantly prolonged r-time compared to kaolin controls. Only TLN-treated human endothelial cells and neonatal porcine islets prolonged time to clot formation. Detection of membrane-bound TLN was confirmed by immunohistochemistry and fluorescence activated cell sorter. In vivo, perfusion of a nonhuman primate kidney TLN-supplemented preservation solution in a sensitized model of transplantation demonstrated no evidence of TLN systemically. Histologically, TLN was shown to be present up to 4 days after transplantation. There was no platelet deposition, and TMA severity, as well as microvascular injury scores (glomerulitis + peritubular capillaritis), were less in the TLN-treated animals. Despite promising evidence of localized efficacy, no survival benefit was demonstrated.

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Addressing the challenges of sleeve gastrectomy in end-stage renal disease: Analysis of 100 consecutive renal failure patients.
Kim Y; Shi J; Freeman CM; Jung AD; Dhar VK; Shah SA; Woodle ES; Diwan TS.
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Surgery. , 2017 Apr 12.
[Journal Article]
UI: 28411866
BACKGROUND: While previous studies have demonstrated short-term efficacy of laparoscopic sleeve gastrectomy in candidates awaiting renal transplantation, the combination of morbid obesity and end-stage renal disease presents unique challenges to perioperative care. We demonstrate how increasing experience and the development of postoperative care guidelines can improve outcomes in this high-risk population.
METHODS: Single-center medical records were reviewed for renal transplantation candidates undergoing laparoscopic sleeve gastrectomy between 2011 and 2015 by a single surgeon. Postoperative care protocols were established and continually refined throughout the study period, including a multidisciplinary approach to inpatient management and hospital discharge planning. The first 100 laparoscopic sleeve gastrectomy patients were included and divided into 4 equal cohorts based on case sequence.
RESULTS: Compared with the first 25 patients undergoing laparoscopic sleeve gastrectomy, the last 25 patients had shorter operative times (97.8 +/- 27.9 min vs 124.2 +/- 33.6 min), lower estimated blood loss (6.6 +/- 20.8 mL vs 34.0 +/- 38.1 mL), and shorter hospital duration of stay (1.7 +/- 2.1 days vs 2.9 +/- 0.7 days) (P < .01 each). Readmission rates, complications, and 1-year mortality did not differ significantly.
CONCLUSION: Increasing experience and the development of clinical care guidelines in this high-risk population is associated with reduced health care resource utilization and improved perioperative outcomes.
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BACKGROUND: Patients with a body mass index (BMI) >35 kg/m2 who need kidney transplant present with increased postoperative mortality and reduced kidney graft survival compared to patients with a lower BMI. For this reason, obese patients are often excluded from the transplantation waiting list. The aim of this study was to evaluate the feasibility and the results of laparoscopic sleeve gastrectomy (LSG) for obese patients awaiting a kidney transplant.
METHODS: This was a retrospective study on patients with dialysis-dependent renal failure (DDFR) operated on at two first-level bariatric centers in Paris (France). All the patients were contraindicated for kidney transplantation due to the presence of morbid obesity.

RESULTS: Nine DDFR patients with a mean BMI of 45.9 kg/m2 underwent LSG for the treatment of obesity. Furthermore, all patients presented with hypertension and sleep apnea and six out nine were diabetics. In the immediate postoperative period, all patients were transferred to the intensive care unit (mean stay of 2.1 days). The only major adverse event was a delayed weaning from mechanical ventilation in one patient. The mean hospital stay was 5.5 days (3-12). The total weight loss (TWL) was 27.1, 33.6, and 39.5 kg at 6, 12, and 18 months, respectively. One patient underwent renal transplantation 18 months after LSG, and the other five patients were actively listed for kidney transplantation.

CONCLUSIONS: According to the results of this small sample series, LSG seems to be an effective and safe procedure in DDFR patients with concomitant obesity and can increase access to transplantation.
OBJECTIVES: Laparoscopic donor nephrectomy is now a commonly performed procedure in most of renal transplantation centers. However, the suitability of laparoscopy for donors with abnormal venous anatomy is still a subject of debate.

MATERIALS AND METHODS: Between August 2007 and August 2014, 243 laparoscopic donor nephrectomies were performed in our institution. All donors were evaluated with preoperative three-dimensional spiral computed tomography (CT) angiography. Thirteen (5.35%) donors had a left renal vein anomaly. A retrospective analysis was performed to collect donor and recipient demographics and perioperative data.
RESULTS: Four donors had a type I retroaortic vein, seven had type II retroaortic vein and a circumaortic vein was seen in three donors. The mean operative time was 114 +/-11 minutes and mean warm ischemia time was 202 +/-12 seconds. The mean blood loss was 52.7 +/-18.4mL and no donor required blood transfusion. Mean recipient creatinine at the time of discharge was 1.15 +/-0.18mg/dL, and creatinine at six months and one year follow-up was 1.12 +/-0.13mg/dL and 1.2 +/-0.14mg/dL, respectively. There were no significant differences in operative time, blood loss, warm ischemia time, donor hospital stay or recipient creatinine at 6 months follow-up, following laparoscopic donor nephrectomy in patients with or without left renal vein anomalies. 

CONCLUSION: Preoperative delineation of venous anatomy using CT angiography is as important as arterial anatomy. Laparoscopic donor nephrectomy is safe and feasible in patients with retroaortic or circumaortic renal vein with good recipient outcome.

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Prophylactic ureteric stenting in renal transplantation reduces major urological complications; however, morbidity is related to the indwelling duration of a stent. We aimed to determine the optimal duration for stents in this clinical setting. Patients (aged 2-75 years) from six UK hospitals who were undergoing renal transplantation were recruited and randomly assigned to either early stent removal at 5 days (without cystoscopy) or late removal at 6 weeks after transplantation (with cystoscopy). The primary outcome was a composite of stent-related complications defined as pain, visible hematuria, migration, fragmentation, and urinary tract infections (UTIs) within 3 mo of transplantation. Between May 2010 and Nov 2013, we randomly assigned 227 participants, with 205 included in the final analysis of the primary outcome. Stent-related complications were significantly higher in the late versus early stent removal groups (36 of 126 [28.6%] vs. 6 of 79 [7.6%]; p < 0.001). The majority of stent complications consisted of UTIs, with an incidence of 31 of 126 (24.6%) in the late group compared with 6 of 79 (7.6%) in the early group (p = 0.004). We found early stent removal on day 5 significantly reduced stent-related complications and improved quality of life in the first 3 mo after transplantation (ISRCTN09184595).
Minimally Invasive, Laparoscopic, and Robotic-assisted Techniques Versus Open Techniques for Kidney Transplant Recipients: A Systematic Review.

Wagenaar S; Nederhoed JH; Hoksbergen AW; Bonjer HJ; Wisselink W; van Ramshorst GH.

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European Urology. , 2017 Mar 03.

[Journal Article]

Ui: 28262412

CONTEXT: Literature on conventional and minimally invasive operative techniques has not been systematically reviewed for kidney transplant recipients.

OBJECTIVE: To systematically evaluate, summarize, and review evidence supporting operating technique and postoperative outcome for kidney transplant recipients.

EVIDENCE ACQUISITION: A systematic review was conducted in PubMed-Medline, Embase, and Cochrane Library between 1966 up to September 1, 2016, according to Preferred Reporting Items for Systematic Review and Meta-analysis guidelines. Articles were included and scored by two independent reviewers using Group Reading Assessment and Diagnostic Evaluation (GRADE), Newcastle-Ottawa Quality Assessment Scale (NOS), and Oxford guidelines for level of
evidence. Main outcomes were graft survival, surgical site infection, incisional hernia, and cosmetic result. In total, 18 out of 1954 identified publications were included in this analysis.

EVIDENCE SYNTHESIS: Included reports described conventional open, minimally invasive open, laparoscopic, and robotic-assisted techniques. General level of evidence of included studies was low (GRADE: 1-3; NOS: 0-4; and Oxford level of evidence: 4-2). No differences in graft or patient survival were found. For open techniques, Gibson incision showed better results than the hockey-stick incision for incisional hernia (4% vs 16%), abdominal wall relaxation (8% vs 24%), and cosmesis. Minimally invasive operative recipient techniques showed lowest surgical site infection (range 0-8%) and incisional hernia rates (range 0-6%) with improved cosmetic result and postoperative recovery. Disadvantages included prolonged cold ischemia time, warm ischemia time, and total operation time.

CONCLUSIONS: Although the level of evidence was generally low, minimally invasive techniques showed promising results with regard to complications and recovery, and could be considered for use. For open surgery, the smallest possible Gibson incision appeared to yield favorable results.

PATIENT SUMMARY: In this paper, the available evidence for minimally invasive operation techniques for kidney transplantation was reviewed. The quality of the reviewed research was generally low but suggested possible advantages for minimally invasive, laparoscopic, and robot-assisted techniques.

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Supplemental oxygen during hypothermic kidney preservation: A systematic review. [Review]

O'Callaghan JM; Pall KT; Pengel L; Consortium for Organ preservation in Europe (COPE).

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We reviewed the evidence for ex-vivo Supplemental Oxygen during Hypothermic preservation (SOH) for deceased donor kidneys. Bibliographic databases were searched for human and animal studies of SOH in kidney transplantation reporting on patient or animal survival rate, discard rate, technical complications or renal function outcomes. We make special reference to a specific subgroup: supplemental oxygen applied during cold perfusion, referred to as Hypothermic Oxygenated Perfusion (HOP). Four human and 25 animal studies were identified. The data present conflicting results but suggest that the effects of oxygen on restoring kidney function during preservation may be of value for DCD kidneys and/or kidneys that have undergone a period of hypotension, warm ischemia or poor perfusion in the donor. There is very little information available from human or animal studies. This work highlights to the transplant community that far more high quality clinical studies are required to understand this technology and its role before widespread clinical introduction.

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INTRODUCTION: Kidney transplantation (KT) is the preferred treatment for patients with end-stage renal disease (ESRD). To reduce the morbidity of the open surgery, a robotic-assisted approach has been recently introduced. Our aim is to evaluate surgical and functional results on 17 cases of robotic-assisted kidney transplantation (RAKT) performed at the same institution.

MATERIALS AND METHODS: From July 2015 to June 2016, we performed 17 cases of RAKT from living donors in pre-emptive patients, who underwent laparoscopic nephrectomy. A prospective pilot study was made at Fundacio Puigvert (Barcelona), evaluating functional and surgical outcomes. In this series, we considered the functional results, surgical outcomes and complications rates.

RESULTS: Seventeen patients successfully underwent RAKT, in particular surgical console time was 181 min (150-200) with vascular suture time 42 min (32-48), and estimated blood loss <70
ml. Overall ischemia time was 98.9 min (84-140). No patient was converted to open transplantation. No major surgical intra-operative complications were observed. The mean post-operative serum creatinine level 160 mumol/L (81-479). We reported a case of delayed graft function (DGF), one case of graft arterial thrombosis and one case of intraperitoneal hematoma. No anastomosis revision and wounds infections occurred.

CONCLUSION: RAKT with regional hypothermia appears to be a safe surgical procedure in a properly selected group of patients. The potential advantages of RAKT are related to the quality of the vascular anastomosis, the possible lower complication rate and the shorter recovery of the recipients.
25.
Laparoscopic sleeve gastrectomy: gateway to kidney transplantation.
Kienzl-Wagner K; Weissenbacher A; Gehwolf P; Wykypiel H; Ofner D; Schneeberger S.
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Surgery for Obesity & Related Diseases. , 2017 Jan 06.
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BACKGROUND: The prevalence of obesity and obesity-related morbidity in end-stage renal disease patients is rising. Although it is established that obesity does not abrogate the transplant benefit with respect to lower long-term mortality and cardiovascular risk, it is associated with increased graft failure, delayed graft function, surgical complications, prolonged hospital stay, and costs.
OBJECTIVES: To examine the safety and efficacy of LSG (laparoscopic sleeve gastrectomy) in renal transplant candidates and evaluate transplant outcomes.
SETTING: Single-center prospective nonrandomized trial
METHODS: We here report on a prospective single-center trial establishing a 2-step approach for obese renal transplant candidates. Patients with end-stage renal disease and a BMI (body mass index) of 35 kg/m2 or higher underwent laparoscopic sleeve gastrectomy. After reaching a BMI of<35 kg/m2, patients were waitlisted for kidney transplantation. Age, gender, body mass index (BMI), associated comorbidities, cause of end-stage renal disease, surgical complications, and outcome after kidney transplantation (graft survival, incidence of delayed graft function, incidence of rejection, serum creatinine) were collected.
RESULTS: LSG was performed in 8 renal transplant candidates with a mean BMI of 38.8 kg/m2 each. BMI dropped to below 35 kg/m2 within a median of 3 months. Percent excess body mass index loss (%EBMIL) was 62.7% at 1 year after LSG. Within 17 months (mean) after metabolic
surgery, 7 patients underwent kidney transplantation. All transplants were successful with a serum creatinine of 1.9+/-.8 mg/dL at discharge and stable allograft function thereafter. Mean follow-up was 3.2+-1.4 years; no patient was lost to follow-up.

CONCLUSION: LSG is safe and efficacious for treatment of obesity in renal transplant candidates. Rapid and sustained weight loss and subsequent waitlisting for kidney transplantation may reduce overall and in particular posttransplant patient morbidity.

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26.
A retrospective study to assess the evaluation of living related kidney donors and their outcomes following nephrectomy at Kenyatta National Hospital.
BACKGROUND: Kidney transplantation is the renal replacement therapy of choice for end stage renal disease. To ensure safety regular audit of the donation process is necessary. The aim of this study was to assess the evaluation of potential living related kidney donors and document their outcomes following nephrectomy.

METHODS: This was a retrospective descriptive study involving all living related kidney donors seen at Kenyatta National Hospital (KNH) renal unit from 2010 to 2014. Upon approval by KNH/ERC, the records of all kidney donors were retrieved. Demographic characteristics, number of potential and actual donors, their clinical, laboratory and radiological data as well as documented complications and deaths were recorded. SPSS version 17 (Chicago, Illinois) was used for data entry and analysis. Chi square test and Mann Whitney U test were used as tests of association for categorical and continuous data respectively, with P value set at <0.05.

RESULTS: Median age of the donors was 34 years (IQR 31-39). First-degree relatives were majority (84.5%). Renal function assessment was done using mean glomerular filtration rate (GFR) from the radionuclide scan (DTPA) and serum creatinine levels. The donors had a mean GFR of 99.2 +/- SD 6.6. All the haematological and biochemical tests were within normal. Majority (42.9%) were HLA compatible, but data on HLA typing was missing for 22% of the patients records. On CT angiogram, single renal artery and single renal vein were found in 94 and 88% respectively. Immediate complications included excessive bleeding (2%) and breach of other cavities (4%). Paralytic ileus (32%) and atelectasis (27%) were the most common early postoperative complications. There was no mortality.

CONCLUSION: Our study reports no fatality but significant post-operative complications. These are significant findings that may be used to review and improve care and to educate potential kidney donors on the safety of this procedure in our centre, in a bid to widen the pool of potential living kidney donors.

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Pigs represent a desirable animal model for the study of rejection in kidney transplantation with inbred Yucatan miniature swine (YMS) the most commonly studied strain due to well defined swine leukocyte antigen (SLA) genotypes. However, limitations to YMS may include cost and availability. Outbred Yorkshire pigs are widely available and significantly cheaper than YMS. Recent advances in SLA genotyping have allowed its application to outbred strains. On this basis, we theorized that Yorkshire pigs would be a viable alternative to YMS for the study of rejection in kidney transplantation. To address this question, we performed auto (Auto) and allotransplants (Allo) in 24 Yorkshire pigs, and assessed SLA genotypes and acute rejection after 72h. At sacrifice, and when compared to autotransplants, allotransplants had significant elevations in serum creatinine (8.4+/−1.3 vs 2.8+/−2.0mg/dL for Allo vs autotransplants, respectively) and BUN (61+/−9 vs 19.2+/−15mg/dL for Allo vs autotransplants, respectively). Warm ischemia times between the two groups did not differ (24+/−2.3 vs 26.4+/−1.4min for Auto vs Allo, respectively). There were 16 distinct SLA haplotypes identified from pigs undergoing allotransplantation, no matched donor-recipient pairs, and all allografts demonstrated rejection. Type IIA cellular rejection (Banff) was the most common. One allograft demonstrated hyperacute rejection due a blood group incompatibility. Histologically, the expression of regulatory T-cells and dendritic cells was increased in allografts. These data suggest that Yorkshire pigs may be a useful model for the study of acute rejection in experimental kidney transplantation.
Old habits die hard; does early urinary catheter removal affect kidney size, bacteriuria and UTI after renal transplantation?
Akbari R; Rahmani Firouzi S; Akbarzadeh-Pasha A.
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[Journal Article]
UI: 28487871

Introduction: Renal transplantation is the treatment of choice in chronic renal failure patients.
Objectives: The purpose of this study was to evaluate the impact of urinary catheter removal time on transplanted kidney size and incidence of asymptomatic bacteriuria and urinary tract infections (UTIs). Patients and Methods: This retrospective cohort study evaluated the clinical outcomes of 109 consecutive live donor renal transplant recipients from December 2011 to July 2014. Routine ultrasound examinations were performed on donor's kidney prior to operation and one month later. Kidney volume was calculated. UTI and bacteriuria were evaluated one month later. Patients were divided into two groups based on time of Foley catheter removal (before and after fifth day posttransplantation). Results: In this study 74 males (67.9%) and 35 females (32.1%) were evaluated. Sixty-six patients (57.92%) were in group 1. None of the patients with positive urine culture had UTI but bacteriuria occurred in all of them (21.1%). Bacteriuria time after transplantation and catheter removal was significantly later in group 1 and it was not different in female group but they were later in male group. The mean renal volume increase was positively correlated to renal transplant recipient and donor's age and donor's body mass index (BMI) (P<0.05). Conclusion: This study showed that the time of catheter removal after kidney transplantation does not affect incidence of UTI but increases the probability of bacteria in men whose catheter was removed within 5 days after transplantation. We also found that the renal volume change is not associated with catheter removal time and bacteriuria.

Status
In-Data-Review

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Experiences of renal transplants from donors with renal cell carcinoma after ex vivo partial nephrectomy.
Lim SY; Kim MG; Park KT; Jung CW.
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[Journal Article]
UI: 28480182
PURPOSE: Routine evaluation of kidney donors occasionally reveals an incidental renal mass with an otherwise satisfactory kidney function. The use of such a kidney with an enhancing mass for transplantation is a matter of debate owing to a possible risk of transmission of donor malignancies. We report our experience of kidney transplants from donors with renal cell carcinoma, after ex vivo resection of the renal mass.
METHODS: Two women aged 44 and 56 years were diagnosed with enhancing renal masses measuring 0.9 cm and 0.7 cm, respectively, during donor evaluation for kidney transplantation. Both patients and their families were informed of a potential risk of recurrent renal cell carcinoma following transplantation.
RESULTS: Renal function test results of both donors satisfied the living donor selection criteria. Laparoscopic live donor nephrectomy was performed with ex vivo resection of renal masses on the bench table. Immediate pathological analysis revealed a renal cell carcinoma with a margin of normal renal parenchyma before transplantation. Regimens based on mammalian target of rapamycin inhibitors, which are known for their antitumoral properties, were used for immunosuppression in both recipients. None of the recipients showed recurrence or metastasis during the follow-up period, which was longer than 3 years after transplantation.
CONCLUSION: In light of the ongoing shortage of kidney donors, kidneys with small renal cell carcinoma could be considered for transplantation after appropriate removal of the lesion, with a very low risk of recurrent disease.
The Use of Cook Resonance Metallic Ureteral Stent in Cases of Obstructive Uropathy from Persistent Neoureteral Stenosis, Following Kidney Transplantation.

Introduction: Following kidney transplantation, persistent cases of obstructive uropathy from neoureteral stenosis, at the reimplantation site, may require management with permanent, long-term Double-J stenting, following failed open surgical and minimally invasive procedures. We report our experience of the use of Cook Resonance metallic ureteral stent to manage such cases endourologically. Materials and Methods: Medium-term follow-up of two cases requiring long-term ureteral stenting. Medical records, operative details, and radiologic data were reviewed. Primary outcome was relief of obstructive uropathy, and secondary outcomes included clinicoradiologic complications and cost-effectiveness of the metallic stents compared with standard Double-J stents. Results: Case 1 was a 45-year-old lady with obstructive uropathy after
kidney transplantation. To date, she has had four metallic stents, and on review of operative details and radiologic data, there was seen to be a 60% reduction in operation length from the first to fourth stent exchange. Radiation dose exposure saw an 80% reduction from 2852 to 556Gy.cm². Following 3 years of follow-up, relief of obstructive uropathy has been maintained, with no radiologic or clinical evidence of complications. Case 2 was a 44-year-old lady with obstructive nephropathy requiring long-term stenting after kidney transplantation. Two stent exchanges have been performed to date with a 38% reduction in operation length from 50 minutes to just 31 minutes. Radiation dose exposure saw a 41% reduction. No clinicoradiologic complications or stent-related symptoms have occurred. Discussion: In our experience, use of metallic stents in transplanted kidneys is safe and feasible, with both patients having effective and sustained relief of obstructive uropathy. This stent appears to be well tolerated and is associated with minimal clinicoradiologic complications. Metallic stent replacement is also cost-effective due to the fact that it only requires annual rather than 6-monthly stent changes.

Status
In-Data-Review

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Date Created
20170503

Year of Publication
2017
Background: Multiple renal artery (MRA) kidneys represent a special challenge for surgeons, during both donor nephrectomy and renal transplantation.

AIMS: This study aims to evaluate both donors and recipients outcomes of laparoscopically procured dual renal artery (DRA) kidneys. Patients and Methods: We reviewed the medical records of all living kidney donors who underwent laparoscopic donor nephrectomy between April 2009 and December 2014, and their recipients. Operative details and immediate outcomes of both donors and recipients of DRA kidneys were compared to those of donors and recipients of single renal artery (SRA) kidneys.

Results: From a total of 250 laparoscopic donor nephrectomies, 43 (17.2%) were on kidneys having DRAs. The mean operative time was statistically higher in the group with DRA (168.1 mins vs 135.3 mins, p=0.001), however, mean warm and cold ischemia times were the same. There were no complications reported among donors in neither groups, nor conversion to open nephrectomy. Lengths of hospital stay of the donors were similar in both groups. There was no statistically significant difference in immediate allograft function among the two groups.

Conclusions: Laparoscopic procurement of kidneys with dual renal arteries is safe, reliable, and has no significant impact on the neither donor's outcome, nor allograft function.

Copyright Celsius.
Status
In-Data-Review

Authors Full Name
Al-Oraifi, Ibrahim; Tawfeeq, Mansour; Al-Hellow, Hamad; Al-Qahtani, Mohammed S; Al-Bugami, Meteb M; Al-Shahrani, Abdulwahab; Osian, Gelu.

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20170502
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Evaluation of renal function in a specific population of living kidney donors.
de Souza Rodrigues T; Amorim de Albuquerque AL; de Oliveira Cosme FA; de Oliveira JAMG; Magalhaes I; Teles F; Pedrosa AF.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 28233463

BACKGROUND: The increase in candidates for kidney transplant has led to growth in the number of living donor transplants. Therefore, studies that adequately evaluate the possible long-term consequences of elective transplant nephrectomy are needed.

OBJECTIVE: To evaluate the possible long-term adverse effects of transplant nephrectomy on the renal function of living kidney donors.

DESIGN: A cross-sectional study.

PARTICIPANTS: Thirty-three living kidney donors registered in the transplant programme of a centre in Alagoas, Brazil.

MEASUREMENTS: Demographic characteristics, anthropometric measures, clinical data and biomarkers (creatinine, eGFR, microalbuminuria, cholesterol and triglycerides) were measured. Creatinine clearance was calculated using the Cockcroft-Gault and Modification of Diet in Renal Disease formulae.

RESULTS: Of the 33 individuals, 63.63% were female, and the median age was 45 years. Additionally, 24.24% of these individuals had altered blood pressure, 39.39% had altered abdominal circumference (AC) and 36.36% were obese, with a body mass index >=30. Furthermore, 33.33% of these individuals had elevated triglyceride levels. The average eGFR was 97.33 (33.03-175.9) ml/min/1.73m2 (CG) and 84.14 (29.4-131) ml/min/1.73m2 (MDRD). The microalbuminuria level was altered in 12.12% patients.

CONCLUSION: Kidney donation is unquestionably a safe procedure. However, a better understanding of the long-term consequences of living donor kidney transplantation is still needed. This knowledge may have important implications for the follow-up of these patients. Our study has demonstrated a non-negligible presence of an early marker of glomerular injury and a decrease in the GFR of some patients, thereby reinforcing the proposal for long-term follow-up of living kidney donors.

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In-Process
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Date Created
20170224
Year of Publication
2017

33.
Mycotic Pseudoaneurysm After Kidney Transplantation: Two Case Reports.
Ministro A; Ferreira T; Batista L; Santana A; Alves N; Guerra J; Fernandes E Fernandes J.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 28457423
BACKGROUND: Vascular complications after kidney transplantation may cause allograft loss. Here, we describe 2 patients with extrarenal mycotic pseudoaneurysm after kidney transplantation.

PATIENTS: Patient 1 was a 54-year-old man who developed pseudoaneurysm 60 days after transplantation, and patient 2 was a 48-year-old woman who was diagnosed with a pseudoaneurysm 5 months after transplantation.

RESULTS: Patient 1 had a deceased-donor kidney transplant with end-to-side external iliac arterial anastomosis that was reconstructed 8 days after transplantation owing to rupture and major bleeding. At 60 days after transplantation, he had high serum creatinine level and Doppler ultrasonography showed a pseudoaneurysm of the arterial graft anastomosis and postanastomotic renal artery stenosis. Treatment included surgical excision of the pseudoaneurysm, vascular reconstruction, and fluconazole, with mycologic culture of the resected pseudoaneurysm showing Candida albicans. Patient 2 developed nondisabling intermittent claudication at 5 months after kidney transplantation, with a pseudoaneurysm subsequently observed on Doppler ultrasonography and computerized tomographic angiography. Treatment included renal artery thrombectomy and common iliac bypass to the hilar donor renal artery with inverted ipsilateral long saphenous vein. Operative samples showed C albicans, and she was treated with fluconazole. Both patients had satisfactory outcomes, and both kidney allografts were preserved.

CONCLUSIONS: Extrarenal mycotic pseudoaneurysms after kidney transplantation require a high index of suspicion for early diagnosis, and preservation of the kidney graft may be achieved with the use of surgical treatment and antifungal therapy.

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Status
In-Process

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BACKGROUND: Favorable outcomes of en bloc pediatric donor kidney transplantation to adult recipients are attributed primarily to grafting of twice the nephron mass of a single kidney. METHODS: The kidneys of a 9-month-old male infant were transplanted en bloc in a 56-year-old man. Biopsies were performed 1 hour postreperfusion, 6 months and 3.5 years posttransplant. RESULTS: Warm and cold ischemia times were 21 and 426 minutes, respectively. The recipient was released from hemodialysis 10 days posttransplant and discharged 91 days posttransplant when serum creatinine was 0.9 mg/dL. At 4 years and 9 months posttransplant, serum creatinine was 1.0 mg/dL, and estimated glomerular filtration rate was 58.0 mL/min per 1.73 m2. The grafts increased in size until they reached adult size by 3 months posttransplant. The glomerular area and volume, respectively, increased from 5.9 x 10^3 mum2 and 0.34 x 10^6 mum3 at 1 hour postreperfusion to 14.9 x 10^3 mum2 and 1.27 x 10^6 mum3 at 3.5 years posttransplant, both of
which were less than half of adult size. At 1 hour postreperfusion, podocytes were structurally immature. At 6 months posttransplant, podocyte immaturity was still evident. At 3.5 years posttransplant, podocytes were mature.

CONCLUSIONS: These findings suggest that podocytes and glomerular size of pediatric donor kidneys can continue to mature in adult recipients at rates appropriate for donor age when transplanted en bloc. The maturational levels of podocytes and glomeruli may also be a factor involved in favorable outcomes of en bloc pediatric donor kidney transplantation.

Status
In-Data-Review

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Date Created
20170331

Year of Publication
2017

35.
Continuous Normothermic Ex Vivo Kidney Perfusion Is Superior to Brief Normothermic Perfusion Following Static Cold Storage in Donation After Circulatory Death Pig Kidney Transplantation. Kathys JM; Cen JY; Chun YM; Echeverri J; Linares I; Ganesh S; Yip P; John R; Bagli D; Mucsi I; Ghanekar A; Grant DR; Robinson LA; Selzner M. OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Hypothermic preservation is known to cause renal graft injury, especially in donation after circulatory death (DCD) kidney transplantation. We investigated the impact of cold storage (SCS) versus short periods of normothermic ex vivo kidney perfusion (NEVKP) after SCS versus prolonged, continuous NEVKP with near avoidance of SCS on kidney function after transplantation. Following 30 min of warm ischemia, kidneys were removed from 30-kg Yorkshire pigs and preserved for 16 h with (A) 16 h SCS, (B) 15 h SCS + 1 h NEVKP, (C) 8 h SCS + 8 h NEVKP, and (D) 16 h NEVKP. After contralateral kidney resection, grafts were autotransplanted and pigs followed up for 8 days. Perfusate injury markers such as aspartate aminotransferase and lactate dehydrogenase remained low; lactate decreased significantly until end of perfusion in groups C and D (p < 0.001 and p = 0.002). Grafts in group D demonstrated significantly lower serum creatinine peak when compared to all other groups (p < 0.001) and 24-h creatinine clearance at day 3 after surgery was significantly higher (63.4 +/- 19.0 mL/min) versus all other groups (p < 0.001). Histological assessment on day 8 demonstrated fewer apoptotic cells in group D (p = 0.008). In conclusion, prolonged, continuous NEVKP provides superior short-term outcomes following DCD kidney transplantation versus SCS or short additional NEVKP following SCS.
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20160923
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2017

Allograft transplantation into sensitized recipients with antidonor antibodies results in accelerated antibody-mediated rejection (AMR), complement activation, and graft thrombosis. We have developed a membrane-localizing technology of wide applicability that enables therapeutic agents, including anticoagulants, to bind to cell surfaces and protect the donor endothelium. We describe here how this technology has been applied to thrombin inhibitors to generate a novel class of drugs termed thrombalexins (TLNs). Using a rat model of hyperacute rejection, we investigated the potential of one such inhibitor (thrombalexin-1 [TLN-1]) to prevent acute antibody-mediated thrombosis in the donor organ. TLN-1 alone was able to reduce intragraft thrombosis and significantly delay rejection. The results confirm a pivotal role for thrombin in AMR in vivo. This approach targets donor organs rather than the recipient and is intended to be directly translatable to clinical use.

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Status
In-Data-Review

Authors Full Name
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INTRODUCTION: The surgical issues of renal transplantation (RT) after localized prostate cancer (PC) treatment and oncological outcomes after transplantation in patients on the waiting list with a history of PC were unknown. We conducted a retrospective multicentre study including all patients with PC diagnosed before the kidney transplantation.

METHODS: Fifty-two patients were included from December 1993 to December 2015. The median age at diagnosis of PC was 59.8 years old.

RESULTS: The median PSA rate at diagnosis was 7ng/mL. Twenty-seven, Twenty-four, and one PC were respectively low, intermediate and high risk according to d'Amico classification. Forty-three patients were treated by radical prostatectomy (RP): 28 retropubic, 15 laparoscopic and 3
by a perineal approach. Eighteen patients had a lymph node dissection. Four patients were treated with external radiotherapy and 2 by brachytherapy. Eight patients underwent radiotherapy after surgery. The median time between PC treatment and RT was 35.7 months. The median operating time for the renal transplantation was 180 min (IQR 150-190; min 90-max 310) with a median intraoperative bleeding of 200 mL (IQR 100-290; min 50-max 2000). A history of lymphadenectomy did not significantly lengthen operative time (P=0.34). No recurrence of PC was observed after a median follow of 36 months.

CONCLUSION: PC discovered before RT should be treated with RP to assess the risk of recurrence and decrease waiting for a RT. If the PC is at low risk of recurrence, it seems possible to shorten the waiting time before the RT after a multidisciplinary discussion meeting.

LEVEL OF EVIDENCE: 4.

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Status
In-Process

Authors Full Name
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Institution

Date Created
20170226

Year of Publication
Comparative Study of the Effect of Intravenous Paracetamol and Tramadol in Relieving of Postoperative Pain after General Anesthesia in Nephrectomy Patients.
Manne VS; Gondi SR.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 28298768

AIM: The aim of this study was to compare the effect of intravenous paracetamol and tramadol in relieving of postoperative pain after general anesthesia for nephrectomy in prospective donor patients for kidney transplantation.

MATERIALS AND METHODS: A randomized study was conducted on 100 adult patients scheduled for nephrectomy aged from 35 to 55 years of both sexes and divided into two groups and were administered intravenous paracetamol and tramadol for postoperative pain relief and assessed with visual analog scale score and variations in vital parameters to assess extent of pain relief.

RESULTS: After statistical interpretation of collected data, the observations were extrapolated. There was a statistically significant difference in the pain intensity scores obtained between the paracetamol and tramadol groups.

CONCLUSION: On the basis of the present study, it is concluded that tramadol due to its lesser onset of action time was superior to paracetamol in providing acute postoperative pain relief.

Status
PubMed-not-MEDLINE

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Date Created
Transplantation of the horseshoe kidney can be performed en bloc or split into 2 grafts according to the vascular anomaly and the existence of the urinary collecting system in isthmus. From 2011 to 2014, there were 3 horseshoe kidney transplantations in Korea and transplantations were performed at 2 different centers. The transplantations were carried out successfully for all recipients without complications. All recipients have shown good graft kidney function after transplantation. No severe complication was revealed during follow-up period. We described the surgical technique used in the en bloc method to overcome various vascular anomalies and difficulties in choosing cannulation site and postoperative complications. En bloc transplantation of a horseshoe kidney is a useful strategy for patients with end-stage renal disease, and can provide favorable outcomes compared to the transplantation of a normal kidney.

Status
PubMed-not-MEDLINE
Authors Full Name
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40.

Risk factors of acute kidney injury after orthotopic liver transplantation in China.
Zongyi Y; Baifeng L; Funian Z; Hao L; Xin W.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Scientific Reports. 7:41555, 2017 Jan 30.
[Journal Article]
UI: 28134286

In this study, we determined the risk factors for acute kidney injury (AKI) following orthotopic liver transplantation (OLT) in China. We collected 5074 donation after cardiac death (DCD) OLT recipients who underwent surgery between January 1, 2010, and December 31, 2015, in 86 academic hospitals or transplant centers in China. Univariate and multivariate analyses were used to investigate the criticality of donor, graft, or recipient variables in the development of post-OLT AKI. In all, 4482 patients were included (median age, 49.31 years). Post-OLT AKI occurred in 3.97% patients, and 73.6% of all OLT patients were male. The 1- and 5-year cumulative survival rates (CSRs) of the AKI group were 33.95% and 25.24%, respectively, compared with 86.34% and 70.05%, respectively, of the non-AKI group (P<0.001). The independent risk factors for post-OLT AKI were blood loss, cold ischemia time, warm ischemia time, preoperative serum creatinine, the treatment period with dopamine, overexposure to calcineurin inhibitor, and combined mycophenolate mofetil use (P<0.05). These had a high prediction accuracy for post-OLT AKI (area under the curve [AUC]=0.740).

Status
In-Data-Review
41.
Ex-vivo partial nephrectomy after living donor nephrectomy: Surgical technique for expanding kidney donor pool.
Nyame YA; Babbar P; Aboumohamed AA; Mori RL; Flechner SM; Modlin CS.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 28216945
Renal transplantation has profound improvements in mortality, morbidity, and overall quality of life compared to renal replacement therapy. This report aims to illustrate the use of ex-vivo partial nephrectomy in a patient with a renal angiomyolipoma prior to living donor transplantation. The surgical outcomes of the donor nephrectomy and recipient transplantation are reported with 2 years of follow-up. Both the donor and recipient are healthy and without any significant comorbidities. In conclusion, urologic techniques such as partial nephrectomy can be used to
expand the living donor pool in carefully selected and well informed transplant recipients. Our experience demonstrated a safe and positive outcome for both the recipient and donor, and is consistent with other reported outcomes in the literature.

Status
In-Data-Review

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Date Created
20170220

Year of Publication
2017

42.
Long-Term Outcomes and Discard Rate of Kidneys by Decade of Extended Criteria Donor Age. Messina M; Diena D; Dellepiane S; Guzzo G; Lo Sardo L; Fop F; Segoloni GP; Amoroso A; Magistroni P; Biancone L.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
BACKGROUND AND OBJECTIVES: Extended criteria donors represent nowadays a main resource for kidney transplantation, and recovery criteria are becoming increasingly inclusive. However, the limits of this approach are not clear as well as the effects of extreme donor ages on long-term kidney transplantation outcomes. To address these issues, we performed a retrospective study on extended criteria donor kidney transplantation.

DESIGN, SETTING, PARTICIPANTS, & MEASUREMENTS: In total, 647 consecutive extended criteria donor kidney transplantations performed over 11 years (2003-2013) were included. Donor, recipient, and procedural variables were classified according to donor age decades (group A, 50-59 years old [n=91]; group B, 60-69 years old [n=264]; group C, 70-79 years old [n=265]; and group D, >=80 years old [n=27]). Organs were allocated in single- or dual-kidney transplantation after a multistep evaluation including clinical and histologic criteria. Long-term outcomes and main adverse events were analyzed among age groups and in either single- or dual-kidney transplantation. Kidney discard rate incidence and causes were evaluated.

RESULTS: Median follow-up was 4.9 years (25th; 75th percentiles: 2.7; 7.6 years); patient and graft survival were comparable among age groups (5-year patient survival: group A, 87.8%; group B, 88.1%; group C, 88.0%; and group D, 90.1%; P=0.77; graft survival: group A, 74.0%; group B, 74.2%; group C, 75.2%; and group D, 65.9%; P=0.62) and between dual-kidney transplantation and single-kidney transplantation except for group D, with a better survival for dual-kidney transplantation (P=0.04). No difference was found analyzing complications incidence or graft function over time. Kidney discard rate was similar in groups A, B, and C (15.4%, 17.7%, and 20.1%, respectively) and increased in group D (48.2%; odds ratio, 5.1 with A as the reference group; 95% confidence interval, 2.96 to 8.79).

CONCLUSIONS: Discard rate and long-term outcomes are similar among extended criteria donor kidney transplantation from donors ages 50-79 years old. Conversely, discard rate was strikingly higher among kidneys from octogenarian donors, but appropriate selection provides comparable long-term outcomes, with better graft survival for dual-kidney transplantation.

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Status
In-Data-Review

Authors Full Name
Messina, Maria; Diena, Davide; Dellepiane, Sergio; Guzzo, Gabriella; Lo Sardo, Luca; Fop, Fabrizio; Segoloni, Giuseppe P; Amoroso, Antonio; Magistroni, Paola; Biancone, Luigi.

Institution
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Ureteral stent duration and the risk of BK polyomavirus viremia or bacteriuria after kidney transplantation.
OBJECTIVES: Ureteral stents are used in kidney transplantation (KTX) to decrease post-operative complications, but they are associated with BK polyomavirus viremia (BKV). Our primary outcome was to determine the association between ureteral stent duration and BKV. Secondary outcome measures were the association between bacteriuria and stent duration or use of ureteral stent strings.

METHODS: Between January 2010 and January 2015, 403 patients underwent KTX at the Virginia Mason Medical Center and met inclusion criteria. Stent duration was classified as short (<3 weeks) or long (>3 weeks). Multivariate logistic regression models were created to assess for factors associated with BKV. The covariates in the BKV model were chosen a priori based on stent duration and risk factors previously described in the literature.

RESULTS: Ureteral stents were placed in 304 (75.4%) transplants. Stent strings were left attached in 166 (54.6%) patients. On multivariate analyses, long stent duration was significantly associated with increased risk of BKV compared with no stent (odds ratio [OR] 1.92, P=.044, 95% confidence interval [CI] 1.04-3.74). Short stent duration was not associated with BKV. Sixty-two (15.4%) patients had bacteriuria. Bacteriuria was associated with female gender (OR 2.77, P<.001, 95% CI 1.58-4.95), and there was a dose-dependent effect with stent duration compared with no stent-short duration (OR 2.46, P=.049, 95% CI 1.05-6.49) and long duration (OR 3.58, P=.004, 95% CI 1.58-9.25). Stent strings were not associated with either complication.

CONCLUSIONS: The association between ureteral stents and BKV may be dose dependent.

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A comparison of the effects of oral vs. intravenous hydration on subclinical acute kidney injury in living kidney donors: a protocol of a randomised controlled trial.

Mackinnon S; Aitken E; Ghita R; Clancy M.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]

UI: 28103829

BACKGROUND: Optimal treatment for established renal failure is living donor kidney transplantation. However this pathway exposes healthy individuals to significant reduction in nephron mass via major surgical procedure. Laparoscopic donor nephrectomy is now the most common method for live donor transplantation, reducing both donor post-operative pain and recovery time. However this procedure exposes kidneys to additional haemodynamic stresses. It has been suggested that donor hydration-particularly the use of preoperative intravenous fluids-may counteract these stresses, reducing subclinical acute kidney injury and ultimately improving long-term renal function. This may be important in both preservation of donor renal function and recipient graft longevity.

METHODS/DESIGN: A prospective single-centre single-blinded randomized controlled trial will be carried out to determine the effects of donor preoperative intravenous fluids. The primary outcome is donor subclinical acute kidney injury (defined as plasma NGAL, >153 ng/ml) on day 1 postoperatively. Secondary outcomes include intraoperative haemodynamics, recipient subclinical acute kidney injury, perioperative complications and donor sleep quality. Donors will be randomised into two groups: the intervention group will receive active pre-hydration consisting
of three litres of intravenous Hartmann's solution between midnight and 8 am before morning kidney donation, while the control group will not receive this. Both groups will receive unlimited oral fluids until midnight, as is routine. Plasma NGAL will be measured at pre-specified perioperative time points, intraoperative haemodynamic data will be collected using non-invasive cardiac output monitoring and clinical notes will be used to obtain demographic and clinical data. The researcher will be blinded to the donor fluid hydration status. Blinded statistical analysis will be performed on an intention-to-treat basis. A prospective power calculation estimates a required sample size of 86 patients.

DISCUSSION: This study will provide important data, as there is currently little evidence about the use of donor preoperative fluids in laparoscopic nephrectomy. It is hoped that the results obtained will guide future clinical practice.

TRIAL REGISTRATION: This study has been approved by the West of Scotland Research Ethics Committee 3 (reference no. 14/WS/1160, 27 January 2015) and is registered with the International Standard Randomised Controlled Trial Number Register (reference no. ISRCTN10199225 , 20 April 2015).

Status
In-Data-Review

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2017
The use of robotic surgery in abdominal organ transplantation: A literature review. [Review]
Levi Sandri GB; de Werra E; Masciana G; Guerra F; Spoletini G; Lai Q.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Clinical Transplantation. 31(1), 2017 Jan.
[Review. Journal Article]
UI: 27726195

Minimally invasive surgical approaches in transplantation are gaining increasing interest, and many centers are reporting their, mainly laparoscopic, experiences. Robotic surgery (RS) has some hypothetical advantages over traditional laparoscopy and has been successfully applied, although infrequently to organ transplantation. Our goal was to review and critique the publications reporting RS use in organ transplantation. Most of the RS experience has been with living renal donor organ procurement and, to a lesser extent, with RS procedures in the transplant recipient. The available literature suggests that RS appears to be a safe surgical alternative to standard open procedures. RS in living liver donor surgery remains limited, and more experience is required before commenting on RS-related outcomes RS in pancreatic transplantation is exceedingly rare. The enhanced precision and ergonomics of RS may expand its applicability to liver living donation and pancreas transplantation at some point in the future.

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Status
In-Data-Review

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46.
Comparison of Two Different Laparoscopic Donor Nephrectomy With Vaginal Extraction Techniques—A Single-Center Experience.
Karayagiz AH; Erturk T; Cakir U; Berber I.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Comparative Study. Journal Article]
UI: 28340802
OBJECTIVE: The aim of this study was to compare the results of standard laparoscopic donor nephrectomy with vaginal extraction (SLDN-VE) and laparoendoscopic single-site donor nephrectomy with vaginal extraction (LESSDN-VE).
METHODS: We analyzed the data of 95 female donors who underwent SLDN-VE (group I; n = 87) and LESSDN-VE (group II; n = 8) in our center. Parameters regarding donor age, body mass index (BMI), length of hospitalization, duration of surgical procedure, amount of blood loss, warm and cold ischemia times, side of graft nephrectomy, number of renal arteries and veins, postoperative visual analog pain scores at 6th and 12th hours (VAS6, VAS12), peri-and postoperative complications of donors and recipients, and graft function at discharge and follow-up were compared between the 2 groups.
RESULTS: No significant difference regarding donor age, mean operative time, amount of blood loss, or warm ischemia time was observed between the 2 groups. However, BMI (P = .018) and pain scores (VAS6: P = .047; VAS12: P = .009) were lower and length of hospitalization (P =
.005) shorter in group II. On the other hand, cold ischemia time (P = .047) was lower in group I. No peri- or postoperative complications occurred for donors and recipients in both groups. Graft function at discharge and during follow-up were similar in both groups.

CONCLUSIONS: Because our first priority is to minimize the morbidity of donors, LESSDN-VE can be chosen in selected female donors for not only decreased pain and hospital stay, but also for better cosmetic outcomes.

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van Smaalen TC; Beurskens DM; Hoogland ER; Winkens B; Christiaans MH; Reutelingsperger CP; van Heurn LW; Nicolaes GA.

UI: 27906828

BACKGROUND: Extracellular histones are cytotoxic molecules that are related to cell stress and death. They have been shown to play a crucial role in multiple pathophysiologic processes like sepsis, inflammation, vascular dysfunction, and thrombosis. Their role in organ donation and graft function and survival is still unknown. The aim of this study was to assess whether an association exists between the presence of extracellular histones in machine perfusates and deceased donor kidney viability.

METHODS: Machine perfusates of 390 donations after circulatory death kidneys were analyzed for histone concentration, and corresponding graft function and survival were assessed.

RESULTS: Extracellular histone concentrations were significantly higher in perfusates of kidneys with posttransplant graft dysfunction (primary nonfunction and delayed graft function) and were an independent risk factor for delayed graft function (odds ratio, 2.152; 95% confidence interval [95% CI], 1.199-3.863) and 1 year graft failure (hazard ratio, 1.386; 95% CI, 1.037-1.853), but not for primary nonfunction (odds ratio, 1.342; 95% CI, 0.900-2.002). One year graft survival was 12% higher in the group with low histone concentrations (P = 0.008) as compared with the group that contained higher histone concentrations.

CONCLUSIONS: This study warrants future studies to probe for a possible role of cytotoxic extracellular histones in organ viability and suggests that quantitation of extracellular histones might contribute to assessment of posttransplant graft function and survival.

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Yuksel Y; Tekin S; Yuksel D; Duman I; Sarier M; Yucetin L; Kiraz K; Demirbas M; Kaya Furkan A; Aslan Sezer M; Demirbas A; Asuman YH.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Transplantation Proceedings. 49(3):523-527, 2017 Apr.
[Journal Article]
UI: 28340826

BACKGROUND: Urologic complications (UC) have gradually decreased in recent years after advanced surgical experience. The incidence of urologic complications varies between 0.22% and 30% in different medical studies. There is no routine usage of double-J stenting (DJS) during renal transplantation (RT) in the literature. It is a necessity, and optimal timing for stent removal is an important question for many transplantation centers.

METHODS: This study includes 818 renal transplant patients whose ureteroneocystostomy anastomoses were completed by use of the Lich-Gregorie procedure during a 2-year period at a transplantation center. We performed 926 renal transplantations at Antalya Medical Park Hospital Renal Transplantation Center between January 2014 and January 2016. The patients were divided into four groups according to the timing of DJS removal.

RESULTS: For group 1, removal time for DJS was between 5 and 7 days; group 2, Removal time for DJS was between 8 and 14 days; group 3, removal time for DJS was between 15 and 21 days; and group 4, removal time for DJS was later than 22 days. The patients were divided into two groups according to removal time of stent as 5 to 14 days and >15 days. DJS was performed again in the patients whose urine output was reduced during the first 5 days after removal of the DJS, whose creatine level increased, and whose graft ureter and collecting tubules were extended as an ultrasonographic finding.

CONCLUSIONS: There is no declared optimal time for the removal of DJS. The removal time was reported between postoperative first week and 3 months in some of the reports of RT centers, according to their protocols. We emphasize that the optimal time for the removal of DJS is 14 to 21 days after RT, based on the findings of our large case report study.

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Date Created
20170325
Year of Publication
2017

49.
Robotic Kidney Transplantation-an Update. [Review]
Sankaran V; Sinha S.
PURPOSE OF REVIEW: Over the last decade, there have been advances in kidney transplantation with introduction of minimally invasive surgery. Robotic surgery is becoming increasingly common across the specialities. There is now increasing experience in robotic kidney transplantation, though it remains a niche procedure. Initial reports suggest that this is a safe, feasible operation when performed by teams familiar with robotic surgery. There have been a few modifications to the initially described procedure, as a result of increasing experience.

RECENT FINDINGS: There is no significant difference in graft and patient survival when compared with open surgery and laparoscopic kidney transplantation. It is a safe procedure and therefore represents a viable alternative to open surgery in selected patients particularly the obese. The advantages include less postoperative pain and fewer wound complications such as surgical site infections and hernia, which could be particularly advantageous in the obese. Robotic kidney transplantation is a procedure that has been developed over the last decade and could have applicability in kidney transplantation in the obese. Its main benefit is in enabling surgery in less accessible spaces due to body habitus, combined with those of using a smaller incision with less associated morbidity, with no inferiority in the reported primary outcomes of graft and patient survival. There are capital costs associated with this procedure, but further studies on the cost-effectiveness of robotic kidney transplantation are needed before it can be adopted widely.

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Cystatin-C is associated with partial recovery of kidney function and progression to chronic kidney disease in living kidney donors: Observational study.
Bang JY; Kim SO; Kim SG; Song JG; Hwang GS.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Medicine. 96(5):e6037, 2017 Feb.
[Journal Article. Observational Study]
UI: 28151912

Donor nephrectomy in living-donor kidney transplantation may result in hyperfiltration injury in remnant kidney; however, its clinical implication in partial recovery of kidney function (PRKF) in remnant kidney and chronic kidney disease (CKD) progression remains unclear. Thus, we investigated the effect of PRKF on CKD development in the residual kidney and the utility of cystatin-C (Cys-C) in evaluating renal function in living-donor kidney transplantation donors. The electronic medical records and laboratory results of 1648 kidney transplant (KT) donors and 13,834 healthy nondonors between January 2006 and November 2014 were reviewed. The predictors of PRKF and CKD diagnosed by Kidney Disease: Improving Global Outcomes (KDIGO) criteria were evaluated by multivariate analysis. CKD risk was compared between KT donors and healthy nondonors using Cox proportional hazard regression analysis following propensity score matching (PSM). The incidence of PRKF for KT donors was 49.3% (813). CKD incidence was 24.8% (408) in KT donors and 2.0% (277) in healthy nondonors. The predictors of PRKF were, male sex (odds ratio [OR], 17.32; 95% confidence interval [CI] 9.16-32.77), age (OR, 1.02; 95% CI, 1.00-1.04; P < 0.001), Cys-C concentration (OR, 1.02; 95% CI, 1.00-1.04; P = 0.02), and preoperative albumin level (OR, 0.49; 95% CI, 0.27-0.89; P = 0.02). The predictors of CKD were age (hazards ratio [HR], 1.04; 95% CI, 1.02-1.05; P < 0.001), Cys-C concentration (HR, 1.024; 95% CI, 1.012-1.037; P < 0.001), and PRKF (HR, 1.41; 95% CI, 1.04-1.92; P = 0.03). After PSM, the risk of progression to CKD was higher in KT donors than in healthy nondonors (HR, 58.4; 95% CI, 34.2-99.8; P < 0.001). Donor nephrectomy is associated with PRKF and progression to CKD. Cys-C is a useful early marker for detecting PRKF and CKD.

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Bang, Ji-Yeon; Kim, Seon-Ok; Kim, Sae-Gyul; Song, Jun-Gol; Hwang, Gyu Sam.
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51.
A Surprising Alliance: Two Giants of the 20th Century.
Sade R.M.
Embase
[Article]
AN: 616396479
Alexis Carrel and Charles Lindbergh were among the most famous international figures in the 20th century: Carrel, the surgeon-scientist who won a Nobel prize as a young surgeon, and Lindbergh, the aviator-engineer who pioneered aviation and promoted commercial flight throughout his life. Surprisingly, these two amazing individuals came together to collaborate on the early development of extracorporeal circulation. Their work was interrupted by the onset of World War II, which destroyed one of them and nearly destroyed the other.
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The effect of aspirin on kidney allograft outcomes; a short review to current studies.
Cheungpasitporn W., Thongprayoon C., Mitema D.G., Mao M.A., Sakhuja A., Kittanamongkolchai W., Gonzalez-Suarez M.L., Erickson S.B.
Embase
Journal of Nephropathology. 6 (3) (pp 110-117), 2017. Date of Publication: 2017.

Context: The use of aspirin in chronic kidney disease (CKD) patients has been shown to reduce myocardial infarction but may increase major bleeding. However, its effects in kidney transplant recipients are unclear. Evidence Acquisitions: A literature search was performed using MEDLINE, EMBASE, and Cochrane Database of Systematic Reviews from inception through September 2016. We included studies that reported odd ratios, relative risks or hazard ratios comparing outcomes of aspirin use in kidney transplant recipients. Pooled risk ratios (RR) and 95% confidence interval (CI) were assessed using a random-effect, generic inverse variance method.

Results: We included 9 studies; enrolling 19 759 kidney transplant recipients that compared aspirin with no treatment. Compared to no treatment, aspirin reduced the risk of allograft failure (4 studies; RR: 0.57, 95% CI: 0.33 to 0.99), allograft thrombosis (2 studies; RR: 0.11, 95% CI: 0.02 to 0.53), and major adverse cardiac events (MACEs) or mortality (2 studies; RR: 0.72, 95% CI: 0.59 to 0.88), but not allograft rejection (3 studies; RR: 0.86, 95% CI: 0.45 to 1.65) or delayed graft function (DGF) (2 studies; RR: 1.00, 95% CI: 0.58 to 1.72) in kidney transplant recipients. The data on risk of major or minor bleeding were limited. Conclusions: Our meta-analysis demonstrates that administration of aspirin in kidney transplant recipients is associated with reduced risks of allograft failure, allograft thrombosis, and MACEs or mortality, but not allograft rejection or DGF. Future studies are needed to assess the risk of bleeding, and ultimately weigh the overall risks and benefits of aspirin use in specific kidney transplant patient populations.

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53.
Relative risk versus absolute risk: One cannot be interpreted without the other.
Noordzij M., Van Diepen M., Caskey F.C., Jager K.J.
Embase
Nephrology Dialysis Transplantation. 32 (pp ii13-ii18), 2017. Date of Publication: 01 Apr 2017.
[Review]
AN: 616151508
For the presentation of risk, both relative and absolute measures can be used. The relative risk is most often used, especially in studies showing the effects of a treatment. Relative risks have the appealing feature of summarizing two numbers (the risk in one group and the risk in the other) into one. However, this feature also represents their major weakness, that the underlying absolute risks are concealed and readers tend to overestimate the effect when it is presented in relative terms. In many situations, the absolute risk gives a better representation of the actual situation and also from the patient's point of view absolute risks often give more relevant information. In this article, we explain the concepts of both relative and absolute risk measures. Using examples from nephrology literature we illustrate that unless ratio measures are reported with the underlying absolute risks, readers cannot judge the clinical relevance of the effect. We therefore recommend to report both the relative risk and the absolute risk with their 95% confidence intervals, as together they provide a complete picture of the effect and its implications.
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Status
EMBASE
Institution
54.
Four-year analyses of renal graft biopsies: A single-center pathology experience.
Canpolat T., Ozdemir B.H., Torun D., Caliskan K., Haberal M.
Embase
[Article]
AN: 616228342
Objectives: Kidney transplant is the best treatment for patients with end-stage renal disease. Long-term graft survival depends on the protection of renal allograft function. Renal allograft biopsy is the most important method for examining an allograft function. Biopsy provides critical information, enabling diagnosis and grading of pathologic changes, prediction of response to therapy, and long-term graft prognosis. Materials and Methods: We reviewed the medical records of patients who underwent renal transplant from living and deceased donors at Baskent University Adana Teaching and Research Hospital between 2010 and 2014 and who had an indication for biopsy. Clinical characteristics and laboratory results of patients were recorded. Patient biopsy samples were examined according to the Banff 2009 classification. Results: Between 2010 and 2014, there were 175 renal transplants performed at our hospital, with 134 recipients (76.6%) having living-donor and 41 recipients (23.4%) having deceased-donor transplants. Fifty-one patients (29.1%) were children, and 124 patients (70.9%) were adults. We found that there were 123 biopsies made from 75 transplant patients over a 4-year period. When examined according to Banff 2009 criteria, the biopsy samples revealed acute T-cellmediated
rejection alone in 14.1% of the samples, acute antibody-mediated rejection in 4%, and a combination of the 2 rejections in 5.7%. Specific infections were detected in 12 patients. The graft nephrectomy rate was 5.1%. Conclusions: This study investigated biopsy results, their relation with patient clinical status and 4-year survival rates, and our pathology experience and the literature. Our future studies with a longer followup and a larger sample size will likely provide more accurate information about graft survival and biopsy results.

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2017

55.
Minimizing the number of urological complications after kidney transplant: A comparative study of two types of external ureteral stents.
Ooms L.S.S., Spaans L.G., Betjes M.G.H., Ijzermans J.N.M., Terkivatan T.

Embase
Experimental and Clinical Transplantation. 15 (2) (pp 143-149), 2017. Date of Publication: April 2017.

[Article]
AN: 616228338
Objectives: The aim of this study was to evaluate the effects of 2 types of external ureteral stents on the number of urological complications after kidney transplant. Materials and Methods: Data were retrospectively collected from 366 consecutive transplants performed between January 2013 and January 2015 in our hospital, in which an external ureteral stent was placed during surgery and removed after 9 days. Urological complications were defined as urinary leakage or ureteral stenosis requiring percutaneous nephrostomy placement. Results: A total of 197 patients received a straight stent with 2 larger side holes (type A; 8F "Covidien" tube; Covidien, Dublin, Ireland) and 169 patients received a single J stent with 7 smaller side holes (type B; 7F "Teleflex" single J stent; Teleflex Medical, Athlone, Ireland). We found a significantly higher number of percutaneous nephrostomy placements with type A stents, with 34 (17%) versus 16 (9%) in type B (P =.030). Reason for percutaneous nephrostomy placement, occurrence of stent dysfunction, and need for early removal (< 8 days) were equal in both groups (P =.397), whereas incidence of rejection and urinary tract infection were higher in type B stent group. Patient and graft survival did not differ between the groups. Conclusions: Use of the type B stent was associated with less urological complications compared with the type A stent.

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Transplant renal vein thrombosis usually occurs early after surgery with a reported prevalence of 0.1% to 4.2%. It is a devastating event that ultimately leads to graft loss in almost all cases. There are many predisposing factors related to donor, recipient, surgery, and immunosuppression, with mechanical factors being considered the most common causes of transplant renal vein thrombosis. The clinical manifestations of acute renal vein thrombosis are nonspecific and are not dissimilar to the features of urine leak, urinary obstruction, or severe acute rejection. The diagnosis of transplant renal vein thrombosis depends on a high index of clinical suspicion and duplex ultrasonographic scans. Although venography remains the criterion standard, this procedure is invasive and nephrotoxic, due to use of ionizing contrast agents and also due to exposure to ionizing radiation. There are 2 therapies that have been described in the literature for salvaging a renal allograft with transplant renal vein thrombosis: thrombolytic therapy and surgical thrombectomy. The usual end result is renal allograft nephrectomy because the diagnosis is almost always too late.

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Heparin-based hydrogels induce human renal tubulogenesis in vitro.
Weber H.M., Tsurkan M.V., Magno V., Freudenberg U., Werner C.
Embase
[Article In Press]
AN: 616412155

Dialysis or kidney transplantation is the only therapeutic option for end stage renal disease. Accordingly, there is a large unmet clinical need for new causative therapeutic treatments. Obtaining robust models that mimic the complex nature of the human kidney is a critical step in the development of new therapeutic strategies. Here we establish a synthetic in vitro human renal tubulogenesis model based on a tunable glycosaminoglycan-hydrogel platform. In this system, renal tubulogenesis can be modulated by the adjustment of hydrogel mechanics and degradability, growth factor signaling, and the presence of insoluble adhesion cues, potentially providing new insights for regenerative therapy. Different hydrogel properties were systematically investigated for their ability to regulate renal tubulogenesis. Hydrogels based on heparin and matrix metalloproteinase cleavable peptide linker units were found to induce the morphogenesis of single human proximal tubule epithelial cells into physiologically sized tubule structures. The generated tubules display polarization markers, extracellular matrix components, and organic anion transport functions of the in vivo renal proximal tubule and respond to nephrotoxins comparable to the human clinical response. The established hydrogel-based human renal tubulogenesis model is thus considered highly valuable for renal regenerative medicine and personalized nephrotoxicity studies. Statement of Significance: The only cure for end stage kidney disease is kidney transplantation. Hence, there is a huge need for reliable human kidney models to study renal regeneration and establish alternative treatments. Here we show the development and application of an in vitro human renal tubulogenesis model using heparin-based hydrogels. To the best of our knowledge, this is the first system where human renal tubulogenesis can be monitored from single cells to physiologically sized tubule structures in a tunable hydrogel system. To validate the efficacy of our model as a drug toxicity platform, a chemotherapy drug was incubated with the model, resulting in a drug response similar to human clinical pathology. The established model could have wide applications in the field of nephrotoxicity and renal regenerative medicine and offer a reliable alternative to animal models.

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Status
ARTICLE IN PRESS

Institution
All causes of renal allograft injury, when severe and/or sustained, can result in chronic histological damage of which interstitial fibrosis and tubular atrophy are dominant features. Unless a specific disease process can be identified, what drives interstitial fibrosis and tubular atrophy progression in individual patients is often unclear. In general, clinicopathological factors known to predict and drive allograft fibrosis include graft quality, inflammation (whether "nonspecific" or related to a specific diagnosis), infections, such as polyomavirus-associated nephropathy, calcineurin inhibitors (CNI), and genetic factors. The incidence and severity of chronic histological damage have decreased substantially over the last 3 decades, but it is difficult to disentangle what effects individual innovations (eg, better matching and preservation techniques, lower CNI dosing, BK viremia screening) may have had. There is little evidence that CNI-sparing/minimization strategies, steroid minimization or renin-angiotensin-aldosterone system blockade result in better preservation of intermediate-term histology. Treatment of subclinical rejections has only proven beneficial to histological and functional outcome in studies in which the rate of subclinical rejection in the first 3 months was greater than 10% to 15%. Potential novel antifibrotic strategies include antagonists of transforming growth factor-beta,
connective tissue growth factor, several tyrosine kinase ligands (epidermal growth factor, platelet-derived growth factor, vascular endothelial growth factor), endothelin and inhibitors of chemotaxis. Although many of these drugs are mainly being developed and marketed for oncological indications and diseases, such as idiopathic pulmonary fibrosis, a number may hold promise in the treatment of diabetic nephropathy, which could eventually lead to applications in renal transplantation.

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59.

SerpinC1/Antithrombin III in kidney-related diseases.

Lu Z., Wang F., Liang M.

Embase

Clinical Science. 131 (9) (pp 823-831), 2017. Date of Publication: 2017.

[Review]

AN: 615870590

The gene SerpinC1 encodes a serine protease inhibitor named antithrombin III (ATIII). This protease demonstrates both anticoagulant and anti-inflammatory action. ATIII is the most
important coagulation factor inhibitor, and even minor changes in ATIII can significantly alter the risk of thromboembolism. ATIII can also suppress inflammation via a coagulation-dependent or -independent effect. Moreover, apart from ATIII deficiency, ATIII and its gene SerpinC1 may also be related to many diseases (e.g. Hypertension, kidney diseases). The present review summarizes how ATIII affects the progress of kidney disease and its mechanism. Further studies are required to investigate how ATIII affects renal function and the treatment.


PMID

Status
EMBASE

Institution
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60.
A novel tool for the identification of correlations in medical data by faceted search.
Schmidt D., Budde K., Sonntag D., Profitlich H.-J., Ihle M., Staeck O.

Embase
[Article]
AN: 615989234
This work focuses on the integration of multifaceted extensive data sets (e.g. laboratory values, vital data, medications) and partly unstructured medical data such as discharge letters, diagnostic
reports, clinical notes etc. in a research database. Our main application is an integrated faceted search in nephrology based on information extraction results. We describe the details of the application of transplant medicine and the resulting technical architecture of the faceted search application.

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61.

Incidence, Management, and Risk Factors for Lower Gastrointestinal Bleeding in Renal Transplant Recipients.
Rencuzogullari A., Binboga S., Aytac E., Rabets J., Stocchi L., Ozuner G.

Embase
Transplantation Proceedings. 49 (3) (pp 501-504), 2017. Date of Publication: 01 Apr 2017.

[Article]
AN: 614959219

Background There are limited convincing data regarding management and outcomes of lower gastrointestinal bleeding (LGB) in renal transplant recipients (RTR). The aim of this study was to evaluate incidence, management strategies, and risk factors associated with LGB in RTR.

Methods Between January 2004 and December 2013, RTR with LGB were analyzed. LGB was defined as having clinical evidence of hemorrhage after upper gastrointestinal etiology was ruled out. Results There were 1578 RTR with a mean age of 50 +/- 14 years at the time of
transplantation. Mean follow-up time after transplantation was 57 +/- 45 months. Forty-five (2.9%) patients had a documented site of LGB. The most common causes of bleeding were colitis and angiodysplasia (n = 17). Mean time to LGB after transplantation was 43 +/- 36 months. Twelve patients with LGB required intervention. Three underwent colectomy, endoscopic treatment was utilized in 8, and 1 patient had angiographic embolization to control bleeding. Recurrent LGB developed in 11 patients of 42 patients who did not have surgery at the time of index bleeding. Surgical (n = 1) or endoscopic intervention (n = 4) was required in 5 of recurrent bleeders. LGB was more commonly seen in RTRs who had development of a nonfunctioning kidney (P <.0001). RTR who had an LGB had an increased overall mortality rate (not directly related to the bleeding episode) compared with those who did not have a LGB (P =.001). We did not observe any increased risk of LGB bleeding among patients who were receiving anticoagulant or anti-aggregant treatment agents (P =.76). Conclusions Nonfunctioning kidney after transplant is a risk factor for LGB. Overall mortality rates increased after LGB in RTR. Strategies aiming to prolong transplanted kidney function may reduce the incidence of LGB and improve life expectancy in RTR.

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Publisher
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2017
Background Symptomatic urinary tract infection (UTI) after renal transplantation (RT) is an important morbidity in transplant recipients and may cause pyelonephritis and sepsis. Surgical correction of high-grade vesicoureteral reflux (VUR) after RT is suggested, performing ureteral reimplantation or pyelo-ureteral/uretero-ureteral anastomosis. Recently, extravesical seromuscular tunnel lengthening techniques have been reported with favorable results and low complication rates. Methods We retrospectively reviewed the charts of 38 patients with post-transplantation VUR who underwent reflux correction surgery. Patient characteristics were analyzed to compare our extravesical seromuscular tunnel lengthening technique with uretero-ureteral and pyelo-ureteral anastomosis techniques. Results Twenty patients were treated with the extravesical approach (group I) and 18 patients by pyelo-ureteral or uretero-ureteral anastomosis with the use of native ureter (group II). Mean operative time was significantly shorter in group I than in group II (64.8 vs 110.1 min; P <.05), and mean duration of hospital stay after the operation also was shorter in group I (1.5 vs 5.1 d; P <.05). We determined persistent VUR in postoperative voiding cystouretrography in 2 patients (10%) in group I, but there was regression in VUR grades of all of the patients. There was no significant difference in postoperative number of UTI episodes and serum creatinine levels between the 2 groups. Conclusions Extravesical seromuscular tunnel lengthening is an effective and safe technique for post-transplantation VUR management.
Should Interventional Radiology or Open Surgery Be the First Choice for the Management of Ureteric Stenosis After Transplantation? Dual-Center Study.

Simsek C., Dogan S.M., Piskin T., Okut G., Cayhan K., Aykas A., Tatar E., Uslu A.

Embase

Transplantation Proceedings. 49 (3) (pp 517-522), 2017. Date of Publication: 01 Apr 2017.

[Article]
AN: 614959191

Background Ureteric stenosis (US) is the most common urologic complication after kidney transplantation. In this dual-center retrospective study we compared the efficacy and safety of open surgery versus interventional radiology for the management of US. Methods From 2009 to January 2016, US was treated by surgical revision in 22 (7.8%) out of 281 recipients at one center (group 1) and managed by percutaneous nephrostomy with antegrade nephroureteral stenting (PNAS) in 22 (14.2%) out of 155 recipients at the other center (group 2). Results Three patients in group 1 required reintervention and again were treated with open surgery. With a mean follow-up of 42.1 +/- 38.7 months, graft function improved in all but one patients (95%). Three patients in group 2 were admitted with relapse of US not amenable to 2nd PNAS, and 2 of them were managed with surgery. These 3 and 2 other cases with improved graft function after PNAS lost their grafts and returned to hemodialysis. The remaining 17 patients (77%) still have functioning grafts. There was no statistically significant difference between the efficacy of PNAS and open surgery for the management of post-transplantation US. However, a benefit in favor of open surgery existed for type 2 urinary tract obstruction in terms of decreased reintervention rate and much better protection of the graft function and survival. Conclusions Both interventional radiology and open surgery have acceptable efficacy rates in the management of ureteric complications after renal transplantation. Open surgery is a better treatment option for type 2 obstruction.

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PMID
64. Outcomes of Kidney Transplantations From the Same Deceased Donor to Two Different Recipients: A Single-Center Experience.

Embase
Transplantation Proceedings. 49 (3) (pp 460-463), 2017. Date of Publication: 01 Apr 2017. [Article]
AN: 614959179

Background Kidney transplantation is the best treatment method for end-stage renal disease. Technically, left kidney transplantation is easier than right kidney, and the complication rates in the right are higher than the left kidney. We performed 28 kidney transplantations from 14 deceased donors between November 2010 and May 2016. Our aim was to share our outcomes and experiences about these 28 patients. Methods We performed 182 kidney transplantations between November 2010 and May 2016. Fifty-four kidney transplantations were performed from
deceased donors. Thirty-two of these were performed from 16 of the same donors. These 32 recipients' data were collected and retrospectively analyzed. We excluded the transplantations from two same-donors to their four recipients in this study. The remaining 28 recipients were included in the study. Results The left and right kidney recipients' numbers were equal (14:14). The left kidney:right kidney rate was 11:3 in the first kidney transplantation recipient group; in the second kidney transplantation recipient group, the rate was 3:11. The difference was statistically significant (P = .002). We found no statistical differences for sex, mean age, and body mass index of recipients, total ischemic time of grafts, hospitalization times, creatinine levels at discharge time, and current ratio of postoperative complications of recipients (P > .05). Conclusions There were no differences in the left or the right kidneys or in the first and the second kidney transplantations during the long follow-up period.

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Institution
(Piskin, Unal, Kutluturk, Yildirim, Berktas, Dogan, Yagmur, Coskun, Turkcuoglu, Beytur, Sanli, Colak, Otlu, Taskapan, Sahin, Tabel, Kayabas, Sarac, Toprak) Turgut Ozal Medical Center, Inonu University Faculty of Medicine, Division of Kidney Transplantation, Malatya, Turkey
Publisher
Elsevier USA
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20170421
Year of Publication
2017

65.
The bittersweet taste of tubulo-interstitial glycans.
Talsma D.T., Daha M.R., Van Den Born J.
Embase
Nephrology Dialysis Transplantation. 32 (4) (pp 611-619), 2017. Date of Publication: 01 Apr 2017. [Review]
Recently, interesting work was published by Farrar et al. [1] showing the interaction of fucosylated glycoproteins on stressed tubular epithelial cells with collectin-11 leading to complement activation via the lectin route of complement. This elegant work stimulated us to evaluate the dark side (bittersweet taste) of tubulo-interstitial glycans in kidney tissue damage. As will be discussed, glycans not only initiate tubular complement activation but also orchestrate tubulo-interstitial leucocyte recruitment and growth factor responses. In this review we restrict ourselves to tubulo-interstitial damage mainly by proteinuria, ischaemia-reperfusion injury and transplantation, and we discuss the involvement of endothelial and tubular glycans in atypical and Escherichia coli-mediated haemolytic uraemic syndrome. As will be seen, fucosylated, mannosylated, galactosylated and sialylated oligosaccharide structures along with glycosaminoglycans comprise the most important glycans related to kidney injury pathways. Up to now, therapeutic interventions in these glycan-mediated injury pathways are underexplored and warrant further research.

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66.
Comparison of pfannenstiel or extended iliac port site kidney extraction in laparoscopic donor nephrectomy: Do we have consensus?.
Iemsupakkul P., Kongchareonsombat W., Kijvikai K.
Embase
Objectives: Our objective was to compare the outcomes of the different extraction sites between extended iliac port site incision and Pfannenstiel incision during laparoscopic donor nephrectomy.

Materials and Methods: We prospectively evaluated patients who underwent laparoscopic donor nephrectomy from June 2014 to March 2015 at our institution. Perioperative parameters were included, with particular reference to warm ischemic time. The other parameters recorded included operative time, blood loss, hospital stay, analgesic requirement, and cosmetic results.

Results: We analyzed a total of 41 patients. Kidney retrieval site of each patient was made randomly. Extraction sites were done by using extended iliac port site incisions in 23 patients and by Pfannenstiel incision in 18 patients. Mean warm ischemic time was 4.09 minutes with extended iliac port site incision versus 4.94 minutes with Pfannenstiel incision (P =.04). Mean operative time, blood loss, hospital stay, and analgesic requirements were comparable between the 2 groups. Mean cosmetic score was 10.39 with extended iliac port site versus 12.06 with Pfannenstiel incision. Conclusions: Extraction with extended iliac port site incision had significantly less warm ischemic time than Pfannenstiel incision in laparoscopic donor nephrectomy. It was also not inferior to Pfannenstiel incision regarding the other perioperative parameters that we measured.

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Status
INPROCESS

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Impact of clinical pharmacist intervention in anticoagulation clinic in Sudan.
Ahmed N.O., Osman B., Abdelhai Y.M., El-Hadiyah T.M.H.
Embase
[Article In Press]
AN: 616223035

Background Many trials have compared anticoagulation management provided by a pharmacist led anticoagulation clinic versus usual physician care showing the role for clinical pharmacist in the management of anticoagulant therapy, and demonstrating excellent outcomes. In Sudan, there is no published research evaluating the role of pharmacist in providing pharmaceutical care for patients taking warfarin. Objective The objective of the study is to assess the role of clinical pharmacist intervention in warfarin patients compared to usual medical care. Setting This study was conducted in Ahmed Gasim cardiac surgery and renal transplant center warfarin clinic.

Methods One hundred thirty-five patients were randomly selected from adult patients on warfarin therapy. The history of INR records, and adverse effects for the past year, were recorded. Then patients’ warfarin dose adjustments according to INR, was done by the clinical pharmacist for one year. Patients received continuous verbal education and written information about warfarin. Main outcome measure The primary outcome for this study was the INR control, while the secondary outcomes were the bleeding events and hospitalization due to warfarin. Results After the clinical pharmacist intervention there was significant (P < 0.01) improvement in INR control and a significant (P < 0.05) reduction in incidence of bleeding after clinical pharmacist intervention. Hospitalization due to warfarin related complications (bleeding, high INR, low INR) was also significantly (P < 0.001) reduced. Conclusion Clinical pharmacists intervention in warfarin therapy improve INR control, reduce bleeding and hospitalization due to warfarin complications.

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Publisher
Springer Netherlands
Background: Obesity is a relative contraindication to organ transplantation. Preliminary reports suggest that bariatric surgery may be used as a bridge to transplantation in patients who are not eligible for transplantation because of morbid obesity. Setting: The Bariatric Center at Tampa General Hospital, University of South Florida, Tampa, Florida. Methods: We reviewed the outcomes of 16 consecutive patients on hemodialysis for end-stage renal disease (ESRD) who underwent bariatric surgery from 1998 to 2016. Demographics, comorbidities, weight loss, as well as transplant status were reported. Data is mean +/- SD. Results: Six men and ten women aged 43-66 years (median = 54 years) underwent laparoscopic Roux-en-Y gastric bypass (LRYGB, n = 12), laparoscopic adjustable gastric banding (LAGB, n = 3), or laparoscopic sleeve gastrectomy (LSG, n = 1). Preoperative BMI was 48 +/- 8 kg/m2. Follow-up to date was 1-10 years (median = 2.8 years); postoperative BMI was 31 +/- 7 kg/m2; %EBWL was 62 +/- 24. Four patients underwent renal transplantation (25%) between 2.5-5 years after bariatric surgery. Five patients are currently listed for transplantation. Five patients were not listed for transplantation due to persistent comorbidities; two of these patients died as a consequence of their comorbidities (12.5%) more than 1 year after bariatric surgery. Two patients were lost to follow-up (12.5%). Conclusion: Bariatric surgery is effective in patients with ESRD and improves access to renal transplantation. Bariatric surgery offers a safe approach to weight loss and improvement in comorbidities in the majority of patients. Referrals of transplant candidates with obesity for bariatric surgery should be considered early in the course of ESRD.
A single-center experience of kidney transplantation from donation after circulatory death: Challenges and scope in India.

Singh S., Kumar S., Dasgupta S., Kenwar D.B., Rathi M., Sharma A., Kohli H.S., Jha V., Gupta K.L., Minz M.

Embase
Indian Journal of Nephrology. 27 (3) (pp 205-209), 2017. Date of Publication: May-June 2017.
[Article]
AN: 616102994

Donation after circulatory death (DCD) has never been attempted in India because of legal constraints and lack of guidelines for the withdrawal of life support in end-of-life situations. The present report describes the initial experience of transplantation of organs from DCD donors in a tertiary care center in India. Between 2011 and 2015, five donors had kidneys retrieved after cardiac arrest. These patients were declared dead after waiting for 5 min with no electrocardiographic signal on monitor following cardiopulmonary resuscitation (CPR), which was restarted in three patients till organ retrieval. All donors received heparin and underwent rapid cannulation of aorta, infusion of preservative cold solution, and immediate surface cooling of organs during retrieval surgery. 9/10 kidneys were utilized. Mean donor age was 29.6 +/- 16.3 years, M:F 4:1 and mean age of recipients was 38.7 +/- 10.8 years, M:F 7:2. Seven patients required dialysis in postoperative period. Mean postoperative day 0 urine output was 1.9 +/- 2.6
L. Baseline creatinine achieved was 1.38 +/- 0.35 mg/dl after a mean duration of 26.12 +/- 15.4 days. Kidneys from donors where CPR was continued after the declaration of death (n = 3) had better recovery of renal function (time to reach baseline creatinine 21.2 +/- 7.2 vs. 34.3 +/- 23.7 days, baseline creatinine 1.36 +/- 0.25 vs. 1.52 +/- 0.45 mg%). In donors without CPR, one kidney never functioned and others had patchy cortical necrosis on protocol biopsy, which was not seen in the kidneys from donors with CPR. Kidneys from DCD donors can serve as a useful adjunct in deceased donor program. Continuing CPR after the declaration of death seems to help in improving outcomes.

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70.
Stroke in patients with chronic kidney disease...: How do we approach and manage it?.
Nayak-Rao S., Shenoy M.
Embase
Indian Journal of Nephrology. 27 (3) (pp 167-171), 2017. Date of Publication: May-June 2017.
[Review]
AN: 616102913
Renal failure is a potent risk factor for stroke, which is a leading cause of morbidity and mortality worldwide. The risk of stroke is 5-30 times higher in patients with chronic kidney disease (CKD),
especially on dialysis. Case fatality rates are also higher reaching almost 90%. It is therefore important to understand the factors that predispose to stroke in this vulnerable population to better apply preventive strategies. The heightened risk of stroke in CKD represents the interplay of the vascular co-morbidities that occur with renal impairment and factors specific to renal failure such as malnutrition-inflammation-atherosclerosis complex, the effect of uremic toxins, dialysis techniques, vascular access, and the use of anticoagulants to maintain flow in the extracorporeal circuit. Old age, hypertension, diabetes, and previous cerebrovascular disease are all risk factors for stroke with the period of dialysis initiation constituting the highest risk period for developing new stroke. Patients with CKD-stage 3-5 have worse survival and diminished functional outcomes following stroke. Thrombolytic therapy for stroke in CKD has shown an increased risk of symptomatic intracranial hemorrhage or serious systemic hemorrhage, and the therapeutic effects may be attenuated. Benefit of statin therapy in dialysis patient as preventive therapy has not been shown to be beneficial. Control of hypertension and the judicious use of antiplatelet agents form the mainstay of stroke prevention. The benefit of antiplatelet therapies and oral anticoagulants has to be balanced against the real and increased risk of bleeding that is most evident in dialysis cohorts. An increased risk of vascular calcification particularly intracerebral vascular calcification has been seen in patients receiving warfarin as prophylaxis in atrial fibrillation. Newer anticoagulants have not been tested in patients with glomerular filtration rate <30 ml/min and hence have to be used with caution. This article is a review of stroke in patients with CKD and approach to managing it.

Browne J.A., Cancienne J.M., Novicoff W.M., Werner B.C.

Embase
[Article In Press]
AN: 616169080

Background: Two-stage revision remains the most common approach to periprosthetic joint infection of total hip arthroplasty (THA) in the United States. The postoperative risks associated with removal of an infected prosthesis and placement of a spacer have not been thoroughly studied. Methods: Patients who underwent THA implant removal and spacer placement for infection were identified in a large administrative database. Morbidity and mortality rates were assessed for the 90-day postoperative period and readmission rates were assessed at 30 days postoperatively. These outcomes were then compared with those after coronary artery bypass grafting, carotid endarterectomy, prostatectomy, pancreatoduodenectomy (Whipple procedure), and kidney transplant. Results: Implant removal and spacer placement for THA periprosthetic joint infection (n = 10,386) had a 30-day readmission rate of 11.1% and 90-day mortality rate of 2.6%. Major complications were seen in 15.3% patients. Postoperative morbidity was often higher in these patients when compared with other procedures studied. Ninety-day mortality rates were significantly higher compared with carotid endarterectomy, prostatectomy, and kidney transplant (odds ratio [ORs] between 2.1 and 12.5; P < .0001). Readmission rates at 30 days were significantly higher than all other groups including coronary artery bypass grafting and Whipple (ORs between 1.4 and 8.2; P < .0001). Conclusion: Removal of an infected THA with spacer placement is a high-risk surgery. This large study that includes over 10,000 patients helps quantify the risks of readmission, morbidity, and mortality. The rates of adverse outcomes are higher than those for many nonorthopedic operations typically considered to be major surgery.

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Institution
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Publisher
Churchill Livingstone Inc.

Date Created
Serum sTWEAK and FGF-23 levels in hemodialysis and renal transplant patients.
Naji H.E., Ghorbanihaghjo A., Argani H., Raeisi S., Safa J., Alirezaei A.H., Rashtchizadeh N.

Embase
[Article]
AN: 615984929

Background: Kidney transplantation is the treatment of choice for patients with end-stage renal disease. Objective: To evaluate the changes in serum soluble TNF-like weak inducer of apoptosis (sTWEAK) and fibroblast growth factor 23 (FGF-23) in hemodialysis (HD) patients and renal transplant recipients (RTR). Methods: Serum samples were obtained from 30 patients on chronic HD, 30 RTRs, and 30 normal controls. Biochemical factors, sTWEAK, FGF-23, and interleukin-6 (IL-6) were measured by standard methods. Results: Serum levels of sTWEAK in RTRs were significantly higher than those in the HD patients (p=0.025); RTR and HD patients had significantly lower sTWEAK levels than the controls (p=0.001 and p= 0.038, respectively). Serum levels of FGF-23 in HD patients were significantly (p=0.001) higher than those in the RTR; the level was higher in both studied groups compared to that in the controls (p=0.001 for both groups). The mean serum level of IL-6 in HD was significantly higher than that in RTR patients (p=0.013). IL-6 levels in both groups were significantly higher than those in controls (p=0.001 and p= 0.012, respectively). In HD group a negative correlation was found between FGF-23 and sTWEAK (r= -0.375, p=0.041); there were also a significant correlation between FGF-23 and IL-6 (r= 0.480, p= 0.007) and between IL-6 and sTWEAK (r= -0.409, p=0.025). Conclusion: We found that serum sTWEAK is decreased and FGF-23 is increased in HD and RTR groups comparing with the control group. However, further studies are needed to shed light over their direct role on atherosclerosis and cardiovascular outcomes.

Status
EMBASE
Institution
Tailoring the 'Perfect Fit' for renal transplant recipients with end-stage polycystic kidney disease: Indications and timing of native nephrectomy.

Argyrou C., Moris D., Vernadakis S.

In Vivo. 31 (3) (pp 307-312), 2017. Date of Publication: May-June 2017.

[Review]

AN: 615716065

Background: The ideal timing of native nephrectomy in relation to kidney transplantation in patients with autosomal-dominant polycystic kidney disease (ADPKD) can be a very puzzling decision for transplant surgeons and remains a matter of debate. This review article aims to present current literature regarding this highly controversial issue. Materials and Methods: The MEDLINE/PubMed database was searched using "polycystic kidney disease", "renal/kidney transplantation" and "native nephrectomy" as key words. Our search was focused on the optimal timing of and indications for native nephrectomy in renal transplant recipients with ADPKD. Results: In symptomatic cases, pre-transplant unilateral or bilateral native nephrectomy seems
appropriate, in order to alleviate symptoms. In cases that are provided with the option of living-donor transplantation, the performance of the simultaneous procedure could be of benefit. When the principal indication of native nephrectomy is the creation of space for the renal allograft, various studies highlight the safety of the simultaneous approach of either unilateral or bilateral nephrectomy. Conclusion: No consensus exists on the appropriate timing for native nephrectomy in patients with ADPKD. Several issues to be addressed in the decision-making process are the importance of residual diuresis, the longer operative time along with the associated prolonged ischemia time and higher complication rate of the combined procedure.

Status
EMBASE
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74.
A model of acute renal allograft rejection in outbred Yorkshire piglets.
Embase
Transplant Immunology. (no pagination), 2017. Date of Publication: December 15, 2016.
[Article In Press]
AN: 616132346
Pigs represent a desirable animal model for the study of rejection in kidney transplantation with inbred Yucatan miniature swine (YMS) the most commonly studied strain due to well defined swine leukocyte antigen (SLA) genotypes. However, limitations to YMS may include cost and
availability. Outbred Yorkshire pigs are widely available and significantly cheaper than YMS. Recent advances in SLA genotyping have allowed its application to outbred strains. On this basis, we theorized that Yorkshire pigs would be a viable alternative to YMS for the study of rejection in kidney transplantation. To address this question, we performed auto (Auto) and allotransplants (Allo) in 24 Yorkshire pigs, and assessed SLA genotypes and acute rejection after 72 h. At sacrifice, and when compared to autotransplants, allotransplants had significant elevations in serum creatinine (8.4 +/- 1.3 vs 2.8 +/- 2.0 mg/dL for Allo vs autotransplants, respectively) and BUN (61 +/- 9 vs 19.2 +/- 15 mg/dL for Allo vs autotransplants, respectively). Warm ischemia times between the two groups did not differ (24. +/- 2.3 vs 26.4 +/- 1.4 min for Auto vs Allo, respectively). There were 16 distinct SLA haplotypes identified from pigs undergoing allotransplantion, no matched donor-recipient pairs, and all allografts demonstrated rejection. Type IIA cellular rejection (Banff) was the most common. One allograft demonstrated hyperacute rejection due a blood group incompatibility. Histologically, the expression of regulatory T cells and dendritic cells was increased in allografts. These data suggest that Yorkshire pigs may be a useful model for the study of acute rejection in experimental kidney transplantation.

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2017
Postoperative surgical-site hemorrhage after kidney transplantation: incidence, risk factors, and outcomes.

Hachem L.D., Ghanekar A., Selzner M., Famure O., Li Y., Kim S.J.


AN: 615632920

Studies investigating the incidence, risk factors, and outcomes of surgical-site hemorrhage after kidney transplantation are limited. Patients who underwent a kidney transplant from 1 January 2000 to 30 September 2012 (followed until 31 December 2012) at Toronto General Hospital were included in this study. Postoperative surgical-site hemorrhage was defined as a drop in hemoglobin >=20 g/l over a 24-hour period within 3 days of transplantation, followed by an ultrasound indicating a significant hematoma/collection. A total of 59 of 1203 (4.9%) kidney transplant recipients had postoperative surgical-site hemorrhage. Most cases (89.8%) occurred within 1 day after transplantation. Living donor transplants [OR 0.30 (95% CI: 0.16, 0.55)] and higher recipient BMI [OR 0.54 per 10 kg/m2 increase in BMI (95% CI: 0.30, 0.99)] were associated with a significantly lower risk of bleeding. Chronic preoperative anticoagulant usage led to an increased risk of bleeding but was not statistically significant [OR 1.75 (95% CI: 0.52, 5.88)]. Postoperative hemorrhage was associated with a higher risk of graft loss or death [HR 1.62 (95% CI: 1.01, 2.60)]. While the incidence of postoperative surgical-site hemorrhage in kidney transplantation is relatively low, it may be associated with an increased risk of graft loss or death.  

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Pharmacokinetic and pharmacogenetic analysis of immunosuppressive agents after laparoscopic sleeve gastrectomy.


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[Article In Press]

AN: 615975794

Background: Severe obesity has been shown to limit access to renal transplantation in patients with end-stage renal disease (ESRD). Laparoscopic sleeve gastrectomy (LSG) has been performed in the ESRD population to assist in achieving waitlist and transplant eligibility. Little is known about how LSG impacts the bioequivalence of tacrolimus products and immunosuppression pharmacokinetics. Methods: This was a prospective, open-label, single-dose, crossover, two-period pharmacokinetic (PK) study. The purpose of this study was to assess single-dose PK of immediate-release tacrolimus (IR-TAC), extended-release tacrolimus (ER-TAC), and mycophenolic acid (MPA) in adult ESRD patients post-LSG. Results: Twenty-three subjects were included in the 24-hour PK assessments. The ratio of geometric means between ER-TAC and IR-TAC was 103.5% (90% CI; 89.6%-119.6%) for AUC0-24 and 92.5% (90% CI; 80.4%-106.4%) for Cmax. PK parameters were similar between ER-TAC and IR-TAC, except for Cmin (P=.004) and Cmax (P=.04). MPA AUC0-24 was similar when given with either ER-TAC or IR-TAC (P=.32). Patients expressing CYP3A5*1 genotypes had lower tacrolimus AUC0-24 values vs those with CYP3A5*3/*3 (IR-TACP<.001; ER-TACP=.008). Genotype did not impact MPA PK. Conclusion: Dose modification of immunosuppressants post-LSG may not be necessary aside from standard therapeutic drug monitoring. Copyright © 2017 John Wiley & Sons A/S.

Status
ARTICLE IN PRESS

Institution
Providing Coverage for the Unique Lifelong Health Care Needs of Living Kidney Donors Within the Framework of Financial Neutrality.

Gill J.S., Delmonico F., Klarenbach S., Capron A.M.

Embase

[Article]
AN: 614153594

Organ donation should neither enrich donors nor impose financial burdens on them. We described the scope of health care required for all living kidney donors, reflecting contemporary understanding of long-term donor health outcomes; proposed an approach to identify donor health conditions that should be covered within the framework of financial neutrality; and proposed strategies to pay for this care. Despite the Affordable Care Act in the United States, donors continue to have inadequate coverage for important health conditions that are donation related or that may compromise postdonation kidney function. Amendment of Medicare
regulations is needed to clarify that surveillance and treatment of conditions that may compromise postdonation kidney function following donor nephrectomy will be covered without expense to the donor. In other countries lacking health insurance for all residents, sufficient data exist to allow the creation of a compensation fund or donor insurance policies to ensure appropriate care. Providing coverage for donation-related sequelae as well as care to preserve postdonation kidney function ensures protection against the financial burdens of health care encountered by donors throughout their lives. Providing coverage for this care should thus be cost-effective, even without considering the health care cost savings that occur for living donor transplant recipients.

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78.
Robotic Kidney Transplantation—an Update.
Sankaran V., Sinha S.
Embase
Current Urology Reports. 18 (6) (no pagination), 2017. Article Number: 45. Date of Publication: 01 Jun 2017.
[Review]
Purpose of Review: Over the last decade, there have been advances in kidney transplantation with introduction of minimally invasive surgery. Robotic surgery is becoming increasingly common across the specialities. There is now increasing experience in robotic kidney transplantation, though it remains a niche procedure. Initial reports suggest that this is a safe, feasible operation when performed by teams familiar with robotic surgery. There have been a few modifications to the initially described procedure, as a result of increasing experience. Recent Findings: There is no significant difference in graft and patient survival when compared with open surgery and laparoscopic kidney transplantation. It is a safe procedure and therefore represents a viable alternative to open surgery in selected patients particularly the obese. The advantages include less postoperative pain and fewer wound complications such as surgical site infections and hernia, which could be particularly advantageous in the obese. Summary: Robotic kidney transplantation is procedure that has been developed over the last decade and could have applicability in kidney transplantation in the obese. Its main benefit is in enabling surgery in less accessible spaces due to body habitus, combined with those of using a smaller incision with less associated morbidity, with no inferiority in the reported primary outcomes of graft and patient survival. There are capital costs associated with this procedure, but further studies on the cost-effectiveness of robotic kidney transplantation are needed before it can be adopted widely.


Early Removal of Double-J Stents Decreases Urinary Tract Infections in Living Donor Renal Transplantation: A Prospective, Randomized Clinical Trial.


Embase

Transplantation Proceedings. 49 (2) (pp 297-302), 2017. Date of Publication: 01 Mar 2017.

[Article]

AN: 614513053

Background The optimal timing for stent removal after renal transplantation remains controversial. This article describes an interim analysis of a randomized, prospective, double-blind trial aimed at detecting differences in urological complications between early ureteral stent removal at 1 week and routine ureteral stent removal at 4 weeks. Methods Between October 2010 and March 2015, 103 patients who underwent living donor renal transplantation at a single center were pre-operatively randomly assigned to the early ureteral stent removal (at 1 week) group or the routine ureteral stent removal (at 4 weeks) group. Urinary symptoms, auxiliary examination results, and obstruction events were recorded during 3 months of follow-up. A cost analysis of both the hospitalization and postoperative periods was discussed. Results In total, 52 patients in the 1-week stent group and 51 patients in the 4-week stent group were analyzed. No serious adverse events were reported. Three episodes of urinary tract infections (UTIs) occurred in the 1-week stent group, and 18 such episodes were recorded in the 4-week stent group (5.8% vs 29.4%; P = .002). After adjusting for age, sex, ischemia time, renal artery number, body mass index, multiple arteries, and associated medical illness, regression analysis indicated that only stent duration was associated with UTI (OR, 8.791; 95% CI, 1.984-38.943; P = .004). Conclusions The results of our study demonstrate that ureteral stent removal at 1 week reduces the risk of UTIs compared with routine removal at 4 weeks. Similar effects of ureteral stent removal on complication rates are observed for these two removal times. Copyright © 2016 Elsevier Inc.


Status EMBASE

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Publisher Elsevier USA

Date Created
80.
Predictive model of 1-year postoperative renal function after living donor nephrectomy.
Benoit T., Game X., Roumiguie M., Sallusto F., Doumerc N., Beauval J.B., Rischmann P., Kamar N., Soulie M., Malavaud B.
Embase
International Urology and Nephrology. 49 (5) (pp 793-801), 2017. Date of Publication: 01 May 2017.
[Article]
AN: 614643441
Objective: Kidney transplantation from a living donor nephrectomy (LDN) is the best treatment for end-stage renal disease, but decrease in donor renal function is often revealed. The aim of this study was to evaluate the association between preoperative factors and postoperative estimated glomerular filtration rate (eGFR) and test a predictive model to estimate postoperative eGFR, 1 year after LDN. Patients and methods: We reviewed 226 records of consecutive patients who underwent laparoscopic live donor nephrectomy between 2006 and 2014 in a single tertiary center. Of these, complete data on 202 patients were analyzed. A training (2/3 of the whole population) and a validation set (1/3) were randomized. A multivariate regression model was used to identify predictors and a formula to estimate of 1-year postoperative eGFR in the training set, using the CKD-EPI formula. Then, the formula was subjected to internal validation using the validation set using receiver operating characteristic (ROC) curves. Results: Two hundred and two LLDN were evaluated with a mean preoperative eGFR of 94.1 +/- 15.5 ml/min/1.73 m2 and postoperative eGFR of 64.6 +/- 14.5 ml/min/1.73 m2 (p < 0.0001). In multivariable analysis, age and preoperative eGFR were independent predictors of postoperative eGFR in the training set. A formula to estimate postoperative eGFR was generated with Pearson r = 0.70 in the training cohort and 0.65 in the validation cohort (both p < 0.0001). Area under the ROC curve of the formula was 0.89 in the training cohort and 0.83 in the validation cohort (both p < 0.0001).
Conclusions: Preoperative eGFR and age are predictors of postoperative eGFR after LDN. The internally validated predictive model of postoperative eGFR developed could be an accurate tool.

Status
EMBASE

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20170508

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2017

81.
Analysis of outcome of end-to-end and end-to-side internal iliac artery anastomosis in renal transplantation: Our initial experience with a case series.
Pal D., Sanki P., Roy S.

Embase
Urology Annals. 9 (2) (pp 166-169), 2017. Date of Publication: April-June 2017.
[Article]
AN: 615631217

Introduction: In renal transplantation, there is end-to-side anastomosis of renal artery to external iliac artery and end-to-end anastomosis of renal artery to internal iliac artery. The end-to-end internal iliac artery anastomosis can be associated with complications due to compromised distal vascular supply to limbs and penile erectile tissue. A method of end-to-side anastomosis can overcome them. Till date, there is no case series or trial that has studied the effect of end-to-side anastomosis. This study is aimed at comparing the outcome of end-to-side and end-to-end anastomosis, so as to evaluate the efficacy of end-to-side technique. Materials and Methods: A total of 40 renal transplant recipients were taken, with internal iliac artery anastomosis, and were
divided into two groups, 20 patients with end-to-end and 20 patients with end-to-side anastomosis. The cold ischemia time, arterial anastomosis time, post-operative bleeding and urine leak, claudication, saddle anesthesia and erectile dysfunction, and follow-up recipient creatinine and eGFR and Doppler to look for graft renal artery patency (at 6 months post-transplant) were compared between the two groups. Results: The intraoperative cold ischemia time was slightly more in the group with end-to-end anastomosis, but it was statistically significant (P = 0.22). The arterial anastomosis time was comparable in both the groups (P = 0.65). In the end-to-end group, 15%, 20% and 15% patients had post-operative saddle anaesthesia, claudication and mild-to-moderate erectile dysfunction, which were absent in the end-to-side group. On follow-up, the mean recipient serum creatinine and eGFR were comparable in the two groups. Also, the graft renal artery patency on Doppler was comparable. Conclusion: The end-to-side technique can be definitely applied for renal transplantation, with some advantages over end-to-end technique, and without compromising efficacy. Copyright © 2017 Urology Annals Published by Wolters Kluwer - Medknow.

82.

Comparison of the AN69ST Membrane versus Citrate-Enriched Dialysate on Clotting Events during Hemodialysis without Systemic Anticoagulation.
Background: The optimal management of anticoagulation in hemodialyzed patients with a high risk of bleeding is controversial. Methods: We compared premature termination of dialysis caused by clotting events between AN69ST membranes (G1) and 0.8 mmol/L citrate-enriched dialysate (G2). The number of sessions that had increased venous pressure (VP) and variations in urea-reduction ratio (URR) were analyzed. Results: Six hundred and two sessions were analyzed in 259 patients: 22.4% had sessions that ended prematurely (25% in G1 and 19.1% in G2, p = ns, OR 0.60 [0.34-1.08], p = 0.08). The increase in VP was lower in G2 (23 vs. 70, p < 0.001). URR was higher in G2 (0.56 vs. 0.60, p < 0.001). Conclusion: Clotting events that led to the termination of dialysis were comparable in the 2 groups. However, URR was better in G2, and the number of patients with increased VP in the sessions was lower in G2. Short Summary: Our study compared the effects of the AN69ST membrane and citrate-enriched dialysate on clotting events during the dialysis of 259 patients with a high risk of bleeding. URR was significantly better and fewer cases of increased VP occurred in the citrate group compared to the AN69 ST group. No significant difference was observed regarding the need to prematurely terminate a dialysis session.

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20170428
During the last century, obesity has become a global epidemic. The effect of obesity on renal transplantation may occur in perioperative complications and impairment of organ function. Obese patients have metabolic derangements that can be exacerbated after transplantation and obesity directly impacts most transplantation outcomes. These recipients are more likely to develop adverse graft events, such as delayed graft function and early graft loss. Furthermore, obesity is synergic to some immunosuppressive agents in triggering diabetes and hypertension. As behavioral weight loss programs show disappointing results in these patients, bariatric surgery has been considered as a means to achieve rapid and long-term weight loss. Up-to-date literature shows laparoscopic bariatric surgery is feasible and safe in transplantation candidates and increases the rate of transplantation eligibility in obese patients with end-stage organ disease.

There is no evidence that restrictive procedures modify the absorption of immunosuppressive medications. From 2013 to 2016 we performed six bariatric procedures (sleeve gastrectomy) on obese patients with renal transplantation; mean preoperative body mass index (BMI) was 39.8 kg/m². No postoperative complication was observed and no change in the immunosuppressive medications regimen was needed. Mean observed estimated weight loss was 27.6%, 44.1%, 74.2%, and 75.9% at 1, 3, 6, and 12 months follow-up, respectively. Our recommendation is to consider patients with BMI >30 kg/m² as temporarily ineligible for transplantation and as candidates to bariatric surgery if BMI >35 kg/m². We consider laparoscopic sleeve gastrectomy as a feasible, first-choice procedure in this specific population.

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84.
Embase
Transplantation Proceedings. 49 (4) (pp 674-676), 2017. Date of Publication: May 2017.
[Article]
AN: 615776424
Background Acute kidney injury (AKI) after liver transplantation (LT) is a frequent and serious complication. The incidence of AKI requiring continuous renal replacement therapy (CRRT) ranges from 10% to 30%. Kidney Disease: Improving Global Outcomes guidelines indicate the use of citrate as a locoregional anticoagulant drug for CRRT regardless of the patient's hemorrhagic risk. Despite this indication, however, the use of citrate is still under debate in patients with liver failure and/or LT owing to the potential risk of plasmatic citrate accumulation due to reduced liver clearance. The aim of this study was to evaluate the safety and efficacy of citrate as a locoregional anticoagulation drug in CRRT for AKI after LT. Methods A retrospective analysis was performed in patients with AKI after liver transplantation who were treated with CRRT using citrate as local anticoagulant. Five patients were enrolled from January to December 2015. Results No patients showed complications related to citrate (metabolic acidosis, hyperlactatemia, hypercalcemia, or hyponatremia). All treatments with heparin were stopped
owing to circuit clotting. Treatments with citrate was interrupted where it was no longer needed or when other examinations had to be made. None were stopped because of circuit coagulation.

Conclusions At our center, 5 patients have been successfully treated with the use of CRRT with citrate for AKI during the post-LT course. Our results, though on a small series of patients, provide evidence that CRRT with citrate can be a safe and promising treatment for AKI after LT.

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2017

85.
Surgical Complications in Early Post-transplant Kidney Recipients.

Embase
Transplantation Proceedings. 49 (4) (pp 821-823), 2017. Date of Publication: May 2017.

[Article]
AN: 615776222

Background The purpose of this study was to determine the incidence of early surgical complications of kidney transplantation in our institution and its association with donor and recipient factors, as well as patient and transplant outcome. Methods A retrospective cohort study of all kidney transplants performed during 2015 was made. We evaluated the incidence of surgical complications and the outcome of patients and grafts at a 3-month follow-up interval.

Results During the study period, 141 kidney transplants occurred. Seventeen patients had
surgical complications (6 urologic, 6 vascular, and 5 other complications). Five patients lost the graft during the follow-up. Older age was associated with other surgical complications (P = .023), and graft loss was associated with the existence of surgical complications, namely, vascular complications (P <.001). For both surgical complications in general and urologic complications, a statistically significant relationship was found with patient weight (P = .003 and P = .034, respectively). The correlation between body mass index (BMI) and surgical complications was not statistically significant. Conclusions Our study reveals that older and heavier patients have a higher risk of surgical complications and that vascular complications are associated with graft loss. A statistically significant relationship was not found between BMI and surgical complications, which could indicate that BMI is not the ideal obesity marker. The incidence of surgical complications found in our study is similar to the literature. The selection of transplant recipients is a difficult task, and the possibility of additional surgical complications in older and overweight patients should be taken into account. Copyright © 2017 Elsevier Inc.

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2017

86.
Early Vascular Thrombosis After Kidney Transplantation: Can We Predict Patients at Risk?.
de Freitas R.A.P., de Lima M.L., Mazzali M.
Embase
Transplantation Proceedings. 49 (4) (pp 817-820), 2017. Date of Publication: May 2017.
[Article]
Renal transplant is the therapy of choice for patients with chronic renal disease. In recent years, improvement in immunosuppressive drugs reduced early graft loss associated with acute rejection. However, vascular thrombosis, accounting for 5% of early graft loss, can sensitize the recipient for human leukocyte antibodies, reducing the chance for a second transplant. The aim of this study was to identify risk factors for vascular thrombosis in a single transplant center, to design specific prevention protocol.

Methods
This was a retrospective, case-control study. From the Renal Transplant Unit database, we identified 21 cases of vascular thrombosis in recipients of kidneys from deceased donors. Recipients from the contralateral kidney from the same donor, without vascular complications, were assigned to the control group. Data analyzed included donor, recipient, transplant surgery, and post-operative follow-up. The local ethics committee approved the protocol.

Results
Thrombosis and control groups were comparable for recipient characteristics, cold ischemia time, organ side (right or left), and site of arterial anastomosis. We observed an increased risk for vascular thrombosis in kidneys with multiple veins (odds ratio, 11.32; $P = .03$). Organ retrieval surgery complications, such as vascular lesions or heterogeneous perfusion, despite normal pre-implantation biopsy, were considered risk factors for vascular thrombosis within the first post-operative day (odds ratio, 7.1; $P = .03$).

Conclusions
In this series, multiple renal vein and organ retrieval surgery complications were risk factors for early vascular thrombosis. Copyright © 2017 Elsevier Inc.
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Transplantation Proceedings. 49 (4) (pp 632-637), 2017. Date of Publication: May 2017.
[Article]
AN: 615776098

Introduction Robot-assisted kidney harvesting from living donors is feasible and safe. We report the results of a mono-centric experience relative to 98 consecutive robotic nephrectomies with emphasis on global donor complications. Materials and Methods This is a retrospective cohort study. Donors underwent robot-assisted kidney harvesting. The preferred kidney was the left one even in the presence of vascular anomalies. In the first cases we used a robotic hand-assisted technique, then the totally robotic technique, and finally the modified totally robot-assisted technique. Postoperative complications were ranked according to the five-grade Clavien-Dindo classification. Results Between November 2009 and November 2016, 98 living donors underwent nephrectomy. We experienced 14 complications. The 3 intraoperative ones (3.06%) were 1 pneumothorax and 2 acute bleedings, 1 of them requiring transfusion. The 11 postoperative complications (11.22%) were as follows: 5 wound seromas, 1 rhabdomyolysis (Clavien I), 1 paretic ileum, 1 anemia requiring transfusion, 1 hypertensive crisis (Clavien II), and 2 chylus collections drained by interventional radiologists (Clavien III). Transfusion rate was 2.1%; conversions, reoperations, and mortality were nil. No statistically significant difference was observed between the patients with complications and without in terms of gender, age, anatomical anomalies, body mass index (BMI), and learning curve. We observed a longer global operation length of time in patients with complications. Conclusion Robotic assistance results in shorter and simpler learning curves for the harvesting of kidneys from living donors. It enables an easier and more efficient management of possible intraoperative complications. The rate of postoperative complications is comparable with the rate of complications encountered in traditional laparoscopic series with high numbers of harvestings. Copyright © 2017 Elsevier Inc.

EMBASE
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Background To investigate the clinical characteristics, surgical interventions, and outcomes of arteriovenous fistula (AVF) aneurysms, we retrospectively analyzed patients on regular hemodialysis (HD). Methods We conducted a cohort study of all patients with HD access who presented with AVF aneurysms and underwent operative procedures over a 11-year period. Patients' demographics, comorbidities, vascular access characteristics, management of aneurysms, complications, and outcomes were analyzed. Results Of the 700 end-stage renal failure patients, 530 patients were maintained on HD (130 through PermCath and 400 through AV access in terms of AVF and arteriovenous graft). We identified 129 patients who developed AV aneurysms, and 40 of them required surgical interventions (24 men and 16 women) with a mean age of 58 +/- 14.6 years. The 40 patients who developed AVF aneurysms underwent 43 surgical interventions. The majority of aneurysms were presented with thinning and ulceration (82.5%) of the overlying skin. Thirty-four patients had true aneurysms and 6 had pseudoaneurysms. The
aneurysmal AVF comprised 26 brachiophallic fistulas, 9 radiocephalic fistulas, 3 brachial artery grafts, 1 ulnar-basilic fistula, and 1 Fem-Fem graft at presentation. Patients were treated mainly with ligation (13; 32.5%), excision and repair with graft interposition (15; 37.5%) or vein interposition (11; 27.5%), and end-to-end AVF (1; 2.5%). The median follow-up postsurgery duration was 53 months (range 1-192) and the median duration from fistula creation to the surgical intervention was 52 months (range 4-182). On follow-up, 34 patients continued on HD, while 5 underwent renal transplantation and 1 shifted to peritoneal dialysis. The overall all-cause mortality rate was 37.5% and the leading causes of mortality were sepsis/pneumonia (60%), myocardial infarction, and heart failure (40%). Conclusions In HD patients, the rate of AVF aneurysmal formation is high with a significant rate of morbidity and mortality. Therefore, timely and appropriate evaluation and surgical intervention are crucial. Copyright © 2017 Elsevier Inc. Status EMBASE Author NameID El-Menyar, Ayman; ORCID: http://orcid.org/0000-0003-2584-953X Institution (Al-Thani, Hussein, Sadek, Sharaf, Fares) Department of Surgery, Vascular Surgery, Hamad General Hospital, Doha, Qatar (El-Menyar) Department of Internal Medicine, Weill Cornell Medical College, Doha, Qatar (El-Menyar, Asim) Clinical Research, Trauma and Vascular Surgery, Hamad General Hospital, Doha, Qatar (Al-Thani) Department of Internal Medicine, Hamad General Hospital, Doha, Qatar Publisher Elsevier Inc. (E-mail: usjcs@elsevier.com) Date Created 20170505 Year of Publication 2017

89.
Preliminary results of a newly established organ transplantation program in a teaching hospital.
Objectives: End-stage renal disease is the complete failure of kidney function; kidney transplant offers the best survival advantage. We analyzed data from Al-Basheer Hospital's newly established transplant program and present our kidney transplant results from the first year of operation. Materials and Methods: Between April 2015 and June 2016, 20 kidney transplants were performed (19 living-related donors and 1 deceased donor). We assessed the demographic data, surgical techniques employed, complications, immunosuppressive drugs used, and graft and patient survival rates. The mean recipient age was 32.8 years. There were 10 male and 10 female patients. Two patients underwent preemptive transplant, and 18 were on hemodialysis. Preparation of the donor and recipient employed an established transplant protocol. Induction immunosuppression therapy was used in 13.65% of patients. The left kidney was used from all living donors, and the right kidney was harvested from the deceased donor. The total ischemia time in the living-donor grafts ranged from 30 to 53 minutes; in the deceased donor, the ischemia time was 90 minutes. Intraoperative Doppler ultrasonography was used in most cases. Results: There was no donor mortality, and no significant donor complications occurred, either intraoperatively or postoperatively. There was no recipient mortality, but there were complications in 6 patients. Intraoperative complications were reported in 2 patients: 1 with renal artery thrombosis and the other with external iliac artery dissection. Postoperative complications were reported in 4 patients: slow graft function in 1 patient with thrombotic thrombocytopenic purpura, 1 patient with acute cellular rejection treated with intravenous immunoglobulin, 1 patient with cytomegalovirus gastroenteritis, and 1 patient treated for varicella pneumonia. The follow-up ranged from 1 week to 13 months. Conclusions: The first-year outcomes for our newly established transplant program at Al-Basheer Hospital are comparable to those of well-established programs.
Kinetic glomerular filtration rate estimation compared with other formulas for evaluating acute kidney injury stage early after kidney donation.

Hekmat R., Eshraghi H., Esmailpour M., Hassankhani G.G.

Embase

[Article]
AN: 615143674

Objectives: Kinetic glomerular filtration rate estimation may have more power and versatility than the Modification of Diet in Renal Disease or Cockcroft-Gault formula for evaluating kidney function when plasma creatinine fluctuates rapidly. After kidney donation, glomerular filtration rate rapidly fluctuates in otherwise healthy patients. We compared 3 formulas for estimating glomerular filtration rate: kinetic, Modification of Diet in Renal Disease, and Cockcroft-Gault, for determining stages of acute kidney injury early after kidney donation. Materials and Methods: In 42 living kidney donors, we measured serum creatinine, cystatin C, neutrophil gelatinase-associated lipocalin, and glomerular filtration rates before uninephrectomy and 3 days afterward. To estimate glomerular filtration rate, we used Cockcroft-Gault, Modification of Diet in Renal Disease, and kinetic equations. We sought the most accurate formula for staging acute kidney injury according to the risk, injury, failure, loss, and end-stage criteria. Results: The kinetic glomerular filtration rate model found more cases of stage 3 acute kidney injury than did the Modification of Diet in Renal Disease or Cockcroft-Gault formula. Receiver operating characteristic curves showed that the kinetic glomerular filtration rate model had more sensitivity and specificity than the Cockcroft-Gault formula for discriminating among risk, injury, failure, loss, and end-stage criteria stages of acute kidney injury, based on serum creatinine changes. On day 2 after donation, a more sensitive marker with a shorter half-life (serum neutrophil gelatinase-associated lipocalin) was more significantly correlated with kinetic glomerular filtration rate estimation. Conclusions: The kinetic glomerular filtration rate model was able to discriminate stages of acute kidney injury early after kidney donation according to risk, injury, failure, loss, and
end-stage criteria better than the Modification of Diet in Renal Disease or Cockcroft-Gault formulas. The kinetic model detected failure stage acute kidney injury >= 1 to 2 days earlier than the MDRD formula, CG formula detected no failure. Copyright © Baskent University 2017 Printed in Turkey. All Rights Reserved.

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Publisher
Baskent University (26 Austin Avenue, Baglica Kampusu, P.O. Box 337, Ankara 06530, Turkey)
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20170503
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91.
Outcome of renal transplant in recipients with vasculitis.
Embase
[Article]
AN: 615143671
Objectives: End-stage renal disease develops in a high percentage of patients with vasculitis, in whom kidney transplant has become a therapeutic option. However, limited data are available on the prognosis and outcomes after kidney transplant in these patients. We aimed to compare the long-term graft survival and graft function in 8 renal transplant recipients with vasculitis (granulomatosis with polyangiitis, microscopic polyangiitis, Goodpasture syndrome, and Henoch-Schonlein purpura) with the other kidney recipients at a single center. Materials and Methods: We conducted a retrospective study of patients followed for chronic renal failure associated with vasculitis before renal transplant. We excluded patients with no biopsy-proven nephropathy.
Results: There was no difference in the occurrence of metabolic and cardiovascular complications in our case group compared with the other graft recipients. Infections were frequent and included cytomegalovirus and urinary tract infection. The rates of bacterial and viral infection were equivalent in our population. The incidence of allograft loss was estimated at 1.8%, less than that seen in our entire transplant population. The presence of vasculitis was not significantly related to renal failure (P =0.07). Extrarenal relapse occurred in 1 patient with microscopic polyangiitis. Antineutrophil cytoplasmic antibody levels in patients with granulomatosis with polyangiitis and microscopic polyangiitis did not seem to influence the renal outcome (P =0.08). Circulating antineutrophil cytoplasmic antibodies were associated with the development of vascular lesions in the graft but were not significantly correlated with graft survival (P =0.07).

Conclusions: This study supports the theory that renal transplant is an effective treatment option for patients with end-stage renal disease secondary to vasculitis. These patients fare similarly to, if not better than, other patients. Copyright © Baskent University 2017 Printed in Turkey. All Rights Reserved.

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2017
Embase
[Article]
AN: 615143668
Objectives: Despite surgical and medical advances, vascular complications are still among the major concerns after renal transplant, with a reported incidence of 3% to 15%. We evaluated the incidence and management of our transplant team's vascular complications over 40 years.

Materials and Methods: From November 1975 to the present, we have performed a total of 2594 renal transplant procedures. Of these, 1997 grafts (76%) were obtained from living donors, and 597 grafts (24%) were obtained from deceased donors. All renal transplant procedures, including those performed in pediatric patients, used the extraperitoneal approach to the contralateral iliac fossa. Revascularization was performed for all grafts. A single end-to-end internal iliac artery anastomosis was performed in 1082 patients (41.8%), an end-to-side external iliac artery anastomosis was performed in 1289 patients (49.7%), and an end-to-side common iliac artery anastomosis was performed in 66 patients (2.5%). In 157 procedures (6%), there were at least 2 renal arteries, and both internal iliac arteries or external iliac arteries were used for anastomosis.

Results: We observed 57 vascular complications (2.1%) in 54 renal transplant procedures. The most frequent complication was renal artery stenosis (n = 17; 0.6%). There were 8 instances of renal artery thrombosis (0.4%), 7 of renal artery kinking (0.3%), 5 of renal vein thrombosis (0.2%), 9 of renal vein kinking (0.5%), 3 of external iliac artery dissection (0.01%), 5 renal vein lacerations (0.2%), and 3 renal artery lacerations (0.01%). We performed urgent surgery for 41 vascular complications; 38 were managed successfully. Percutaneous interventional techniques were used successfully for 18 vascular complications. Conclusions: The vascular complication rate in our patients is lower than that reported in the literature. Surgical complications can be minimized with careful transplant technique and close follow-up, as early diagnosis is crucial to early management and successful treatment of complications. Copyright © Baskent University 2017
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Date Created
Background Ischemia/reperfusion injury during kidney transplantation (KTx) delays allograft recovery. Hypoxia-inducible factor-1alpha (HIF-1alpha) is the key regulator of the protective response to ischemia/reperfusion injury. We evaluated the impact of the HIF-1alpha signaling pathway on allograft recovery during cadaveric KTx. Methods Between 1996 and 2015, 46 patients underwent cadaveric KTx. The expression levels of HIF-1alpha-related proteins, including phosphoinositide 3-kinase, phosphorylated (p)-Akt, p-mammalian target of rapamycin, p-Eukaryotic translation initiation factor 4E, p-S6 ribosomal protein, and HIF-1alpha, were immunohistochemically evaluated and semi-quantitatively scored in graft biopsy specimens after 1 hour of revascularization. Ten kidney biopsy specimens collected during donor nephrectomy for living KTx were used as controls. Delayed graft function (DGF) was defined as the need for dialysis within 1 week of KTx. We compared the staining scores of each protein and several clinical parameters between patients with and those without DGF. Results Expression levels of all six proteins in specimens after revasculization were elevated compared with those in controls. Thirty-five patients had DGF. Expression levels of PI3K, p-AKT, p-mTOR, p-eIF4E, and HIF-1alpha were significantly higher in patients without DGF than in those with DGF. Univariate analysis identified expression levels of p-Akt, p-S6, and HIF-1alpha, in addition to donor type (heart beating/non-heart beating), cold ischemic time, and donor age as significant predictors of DGF. Of these, only expression levels of HIF-1alpha and donor type were independently associated with DGF in multivariate analysis. Conclusions Up-regulation of HIF-1alpha in
allografts after reperfusion may be a predictor of early recovery after cadaveric KTx. Copyright © 2016 Elsevier Inc.

PMID

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94.
Bilastine in allergic rhinoconjunctivitis and urticaria: A practical approach to treatment decisions based on queries received by the medical information department.
Leceta A., Sologuren A., Valiente R., Campo C., Labeaga L.

Embase

Drugs in Context. 6 (no pagination), 2017. Article Number: 212500. Date of Publication: 2017.

[Review]

AN: 615432605

Background: Bilastine is a safe and effective commonly prescribed non-sedating H1-antihistamine approved for symptomatic treatment in patients with allergic disorders such as rhinoconjunctivitis and urticaria. It was evaluated in many patients throughout the clinical development required for its approval, but clinical trials generally exclude many patients who will benefit in everyday clinical practice (especially those with coexisting diseases and/or being treated with concomitant drugs). Following its introduction into clinical practice, the Medical Information Specialists at Faes Farma have received many practical queries regarding the optimal use of bilastine in different circumstances. Data sources and methods: Queries received by the Medical Information Department and the responses provided to senders of these queries.
Results: The most frequent questions received by the Medical Information Department included the potential for drug-drug interactions with bilastine and commonly used agents such as anticoagulants (including the novel oral anticoagulants), antiretrovirals, antituberculosis regimens, corticosteroids, digoxin, oral contraceptives, and proton pump inhibitors. Most of these medicines are not usually allowed in clinical trials, and so advice needs to be based upon the pharmacological profiles of the drugs involved and expert opinion. The pharmacokinetic profile of bilastine appears favourable since it undergoes negligible metabolism and is almost exclusively eliminated via renal excretion, and it neither induces nor inhibits the activity of several isoenzymes from the CYP 450 system. Consequently, bilastine does not interact with cytochrome metabolic pathways. Other queries involved specific patient groups such as subjects with renal impairment, women who are breastfeeding or who are trying to become pregnant, and patients with other concomitant diseases. Interestingly, several questions related to topics that are well covered in the Summary of Product Characteristics (SmPC), which suggests that this resource is not being well used. Conclusions: Overall, this analysis highlights gaps in our knowledge regarding the optimal use of bilastine. Expert opinion based upon an understanding of the science can help in the decision-making, but more research is needed to provide evidence-based answers in certain circumstances. Copyright © 2017 Leceta A, Sologuren A, Valiente R, Campo C, Labeaga.

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95.
Thrombotic microangiopathy and the kidney.
Chang A.
Thrombotic microangiopathy is a common renal pathologic finding, which is characterized by the presence of endothelial cell injury and microvascular thrombi. The spectrum of clinical diseases that are connected by a thrombotic microangiopathic injury may appear to be unrelated, but overactivation of the complement system is emerging as an important mechanism, especially in atypical hemolytic uremic syndrome, anti-phospholipid antibody syndrome, scleroderma renal crisis, and others. Although few pathologic findings enable the pathologist to establish the precise etiology of the microvascular injury, the kidney biopsy remains the gold standard for diagnosing renal thrombotic microangiopathy and excluding other potential causes of kidney injury. After this critical step, additional investigation of the clinical and laboratory data is necessary to establish the underlying etiology and guide subsequent therapeutic options. The salient clinical and pathologic features of common diseases that are associated with thrombotic microangiopathy will be discussed. Copyright © 2017

96.
Clinical-grade isolated human kidney perivascular stromal cells as an organotypic cell source for kidney regenerative medicine.
Mesenchymal stromal cells (MSCs) are immunomodulatory and tissue homeostatic cells that have shown beneficial effects in kidney diseases and transplantation. Perivascular stromal cells (PSCs) identified within several different organs share characteristics of bone marrow-derived MSCs (BM-MSCs). These PSCs may also possess tissue-specific properties and play a role in local tissue homeostasis. We hypothesized that human kidney-derived PSCs (hkPSCs) would elicit improved kidney repair in comparison with BM-MSCs. Here we introduce a novel, clinical-grade isolation method of hkPSCs from cadaveric kidneys by enriching for the perivascular marker, NG2. hkPSCs show strong transcriptional similarities to BM-MSCs but also show organotypic expression signatures, including the HoxD10 and HoxD11 nephrogenic transcription factors. Comparable to BM-MSCs, hkPSCs showed immunosuppressive potential and, when cocultured with endothelial cells, vascular plexus formation was supported, which was specifically in the hkPSCs accompanied by an increased NG2 expression. hkPSCs did not undergo myofibroblast transformation after exposure to transforming growth factor-b, further corroborating their potential regulatory role in tissue homeostasis. This was further supported by the observation that hkPSCs induced accelerated repair in a tubular epithelial wound scratch assay, which was mediated through hepatocyte growth factor release. In vivo, in a neonatal kidney injection model, hkPSCs reintegrated and survived in the interstitial compartment, whereas BM-MSCs did not show this potential. Moreover, hkPSCs gave protection against the development of acute kidney injury in vivo in a model of rhabdomyolysis-mediated nephrotoxicity. Overall, this suggests a superior therapeutic potential for the use of hkPSCs and their secretome in the treatment of kidney diseases. Copyright © AlphaMed Press, 2016 The Authors.
97.
Long-term risks of kidney living donation: Review and position paper by the ERA-EDTA DESCARTES working group.
Maggiore U., Budde K., Heemann U., Hilbrands L., Oberbauer R., Oniscu G.C., Pascual J., Sorensen S.S., Viklicky O., Abramowicz D.
Embase
Nephrology Dialysis Transplantation. 32 (2) (pp 216-223), 2017. Date of Publication: 01 Feb 2017.
[Review]
AN: 614992517
Two recent matched cohort studies from the USA and Norway published in 2014 have raised some concerns related to the long-term safety of kidney living donation. Further studies on the long-term risks of living donation have since been published. In this position paper, Developing Education Science and Care for Renal Transplantation in European States (DESCARTES) board members critically review the literature in an effort to summarize the current knowledge concerning long-term risks of kidney living donation to help physicians for decision-making purposes and for providing information to the prospective live donors. Long-term risk of end-stage renal disease (ESRD) can be partially foreseen by trying to identify donors at risk of developing 'de novo' kidney diseases during life post-donation and by predicting lifetime ESRD risk. However, lifetime risk may be difficult to assess in young donors, especially in those having first-degree relatives with ESRD. The study from Norway also found an increased risk of death after living donor nephrectomy, which became visible only after >15 years of post-donation follow-up.
However, these findings are likely to be largely the result of an overestimation due to the confounding effect related to a family history of renal disease. DESCARTES board members emphasize the importance of optimal risk-benefit assessment and proper information to the prospective donor, which should also include recommendations on health-promoting behaviour post-donation. Copyright © The Author 2017.

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2017

98.

In-vitro generation of interleukin-10 secreting B-regulatory cells from donor adipose tissue derived mesenchymal stem cells and recipient peripheral blood mononuclear cells for potential cell therapy.
Background Interleukin-10 secreting B-cells are a major subset of B-regulatory cells (B-regs), commonly recognized as CD19+/38hi/24hi/IL10+. They carry out immunomodulation by release of specific cytokines and/or cell-to-cell contact. We have generated B-regs in-vitro from donor adipose tissue derived mesenchymal stem cells (AD-MSC) and renal allograft recipient (RAR) peripheral blood mononuclear cells (PBMC) for potential cell therapy. 

Material and methods Mononuclear cells separated by density gradient centrifugation from 50 ml anti-coagulated blood of 15-RAR and respective donors were analysed for baseline B-regs using appropriate antibodies. Equal amount (20 x 106 cells/ml) of stimulator (irradiated at 7.45 Gy/min for 10 min) and responder (non-irradiated) cells were co-cultured with in-vitro generated AD-MSC (1 x 106 cells/ml) in proliferation medium containing lipopolysaccharide from E. coli K12 strain at 37 degreeC with 5% CO2. Cells were harvested on day-7 and analyzed for viability, sterility, quantity, morphology and phenotyping. In-vitro generated B-reg levels were compared with baseline B-regs. Results In-vitro generated B-reg count increased to 16.75% from baseline count of 3.35%. Conclusion B-regs can be successfully generated in-vitro from donor AD-MSC and RAR PBMC for potential cell therapy.
Renovascular hypertension: results in adulthood of renal autotransplantation performed in children.
Embase
Pediatric Nephrology. (pp 1-6), 2017. Date of Publication: 20 Apr 2017.
[Article In Press]
AN: 615575336

Background: This study describes the long-term results of renal autotransplantation for renovascular hypertension performed in children who are now 21 years of age or older. Methods: Sixteen children (4 boys, 12 girls) with a mean age of 11.2 years at the time of the procedure underwent ex-vivo surgery at the university hospital of Saint-Etienne between 1992 and 2008. Acetylsalicylic acid was used for antiplatelet therapy in the postoperative period, without routine anticoagulation. The mean follow-up period was 15 years. The clinical course of these patients was retrospectively reviewed in adulthood and the results analyzed. Results: The children were treated with a mean of 2.37 drugs per patient, and the mean preoperative blood pressure of the entire patient population was 151/89 mmHg. Mean preoperative creatinine clearance was 80 ml/min/1.73 m2. There was no postoperative death. One patient experienced a thrombosis immediately after the surgery, leading to a redo surgery. In this patient diuresis was restarted, but without efficient concentration and filtration, ultimately leading the patient to have a renal transplant after 1 year. At the end of the follow-up period, eight of the 16 patients (50%) were cured and the others were improved. At the last follow-up the mean blood pressure was 127/70 mmHg, and the mean number of drugs per patient was 0.68. The mean creatinine clearance at last follow-up was 104.3 ml/min/1.73 m2. Three patients had secondary procedures, with two undergoing percutaneous angioplasty (at postoperative months 9 and 12, respectively) and one having an hepatorenal bypass at postoperative year 4. Primary patency was 12/16 (75%); primary assisted patency was 15/16 (94%); secondary patency was 16/16 (100%). Conclusion: This study shows that renal autotransplantation has good and stable long-term results and is an effective conservative strategy for treating renovascular hypertension in children, thus avoiding nephrectomy. Copyright © 2017 IPNA
End-To-Side Versus End-to-End Uretero-Ureteral Anastomosis in Kidney Transplant Recipients With Disused Atrophic Bladder.

Turunc V., Eroglu A., Tabandeh B.

Embase

Transplantation Proceedings. 49 (3) (pp 528-531), 2017. Date of Publication: 01 Apr 2017.

[Article]

AN: 614959214

Background Extravesical Lich-Gregoir ureteroneocystostomy (UC) is the most widely used method for urinary reconstruction during kidney transplantation. Sometimes it is difficult to perform UC in cases with disused atrophic bladder. Pyelo-ureteral anastomosis (PUA) and uretero-ureteral anastomosis (UUA) may be preferred to UC for these patients. Methods We retrospectively reviewed the charts of 833 kidney transplant recipients operated on by our transplantation team between July 2010 and November 2014. The patients were divided into two groups: Group I consisted of 16 patients who underwent end-to-side UUA and Group II consisted of 20 patients who underwent end-to-end UUA. The two groups were compared in terms of
efficacy, safety, and graft function. Results As we performed end-to-side UUA as a relatively new technique compared with end-to-end UUA, the post-transplantation follow-up period of Group II was significantly longer than Group I (P = .000), but all the patients in both groups had at least 1 year of follow-up. Because the first two patients in Group II, who underwent native ureteral ligation without nephrectomy, developed hydronephrosis in their native kidneys, requiring nephrectomy in the post-transplantation period, we performed native nephrectomy in all of the remaining patients in this group. That is why the mean operative time was significantly longer in Group II compared with Group I (P = .000). There was no significant difference between the two groups in terms of postoperative surgical complications, post-transplantation urinary infections, and graft function. Conclusion End-to-side UUA without native ureteral ligation is a safe surgical technique for urinary tract reconstruction during kidney transplantation in patients with disused atrophic bladder. Copyright © 2017 Elsevier Inc.

101.
Long-term Results of Living Donors in Simultaneous Kidney and Liver Transplantations.

AN: 614959193
Introduction Because of the shortage of organs available for transplantation, living related sequential transplantation with the use of liver and a kidney from the same donor has emerged as a reasonable therapeutic alternative. However, there is insufficient literature about the complications that living donors experience after simultaneous kidney and liver transplantations. Methods From December 2001 to October 2009, 5 living donors provided simultaneous donation of livers and kidneys and 1 living donor donated first her kidney and then her liver. Demographic data of the donors and information concerning the surgery and postoperative observation were collected prospectively. Results All of the donors were female. The median age was 27.5 (range, 19-36) years. Indications requiring the simultaneous transplantation of livers and kidneys were primary hyperoxaluria type 1 (PH1) in 5 potential recipients and cirrhosis due to chronic hepatitis B infection and idiopathic chronic renal insufficiency in 1 potential recipient. Four recipients underwent right hepatectomy (segments 5-8) and right nephrectomy; 1 recipient underwent left hepatectomy (segments 2-4) and right nephrectomy; and 1 recipient underwent left lobectomy (segments 2-3) and right nephrectomy. There were no complications except in 1 donor (postoperative ileus). No donor developed hypertension or microalbuminuria. Conclusions With the right indications, appropriate preoperative evaluation, meticulous surgical technique, proper postoperative care, and long-term close monitoring to minimize morbidity and mortality risks, liver and kidney donation from the same donor can be considered for simultaneous kidney and liver transplantation.   Copyright © 2017 Elsevier Inc.
Background Ureteral stent insertion during kidney transplantation is a matter of debate. Stenting has been proven to reduce the risk of surgical complications. In addition, it has been reported to increase risks such as urinary tract infections especially after operation. Ureteral stent colonization (USC) is known to play a role in the pathogenesis of stent related-infections. The aim of this study was (1) to assess the frequency of USC and values of urine cultures in identifying colonizing bacteria; (2) to assess the importance of indwelling time for USC in live-donor renal transplant recipients; and (3) to evaluate the biomarker role of neutrophil-to-lymphocyte ratio (NLR) on USC. Methods A total of 107 live-donor kidney transplant patients were included in the study (76 men and 31 women). The mean age was 43.7 years, and average indwelling time of the ureteral stent was 24.7 days. Patients were divided into three groups according to indwelling stent time as group 1: 15 to 21 days (3rd week), group 2: 22 to 28 days (4th week), and group 3: 29 to 35 days (5th week). The decision to remove the stent was primarily based on clinical judgment. Ureteral stents were removed with the use of flexible cystoscopy. Midstream urine for urine culture and blood samples for NLR were taken prior to stent removal. The removed stents were divided into three parts and taken for bacteriological investigation. Results Of 107 patients, USC was detected in 24 (22.4%) patients, whereas urinary proliferation was observed in 8 (7.4%) patients. The most common microorganisms found in USC was the Enterecoccus species. The most common microorganisms in urinary culture were Enterecoccus spp. and Klebsiella pneumoniae. All patients with isolated microorganisms in the urine had USC (P <.001). On the other hand, proliferation in urinary culture was observed only in 30% of patients. Urine culture was not significant in identification of USC (P =.063). The three patient groups that were determined according to indwelling stent time were compared in terms of USC, proliferation in urine culture, and NLR. The highest incidence of USC was found in group 3 (44%) and the least in group 2 (11%) (P <.05). No significant difference was found between the groups in terms of urine culture (P =.546). Although no significant difference was found between groups 1 and 2 in NLR values (P =.755), NLR was significantly higher in group 3 (P =.026). Conclusions Colonization is common in ureteral stents inserted in live-donor kidney transplant patients, although routine urine culture is insufficient in identifying this colonization. The most common microorganism detected in ureteral stent colonization was Enterecoccus spp. The 4th week was the most convenient time for stent removal time in terms of USC among the 3rd, 4th, and 5th
weeks. In addition, increased NLR might have value as a biomarker for USC.


[Article]
AN: 614112026

Background A shortage of donors poses a serious problem for organ transplantation around the world. In response, the concept of the expanded criteria donor (ECD) has been defined to include donors with traditionally less favorable characteristics. That definition has now been accepted and is being applied in kidney transplantation in the United States and Europe. However, the ECD has not yet been defined for deceased donor kidney transplantation in Japan. Patients and Methods We analyzed data on graft survival and relevant risk factors in patients who received deceased donor kidney transplants through the East Japan Branch of the Japan Organ Transplant network (n = 1051). Recipients were divided into two groups: the standard-function group (estimated glomerular filtration rate [eGFR] >=20 mL/min/1.73 m2; n = 906) and the poor-function group
(eGFR <20 mL/min/1.73 m²; n = 145; Cox proportional hazards regression analysis; P < .0001). Results The 10-year survival rate was significantly lower in the poor-function group than in the standard-function group (85.5% vs 22.5%; P < .0001). The two groups differed significantly in recipient and donor risk for graft failure. Recipient risk factors were length of time on dialysis before renal transplantation and incidence of acute rejection after transplantation. Donor risk factors were donor category (heart death), age, history of hypertension, presence of cerebrovascular disease, mean urine output, and donor creatinine level immediately before donor nephrectomy, total ischemic time, and warm ischemic time. Conclusion Data from deceased donor transplantation should be analyzed in depth to determine which factors influence renal function after transplantation. In addition, ECD standards should be reconsidered for use in a Japanese context. Copyright © 2016 Elsevier Inc.


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Publisher Elsevier USA
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Carandina S., Genser L., Bossi M., Montana L., Cortes A., Seman M., Danan M., Barrat C.
Embase
Obesity Surgery. (pp 1-6), 2017. Date of Publication: 12 Apr 2017.
Background: Patients with a body mass index (BMI) >35 kg/m² who need kidney transplant present with increased postoperative mortality and reduced kidney graft survival compared to patients with a lower BMI. For this reason, obese patients are often excluded from the transplantation waiting list. The aim of this study was to evaluate the feasibility and the results of laparoscopic sleeve gastrectomy (LSG) for obese patients awaiting a kidney transplant. Methods: This was a retrospective study on patients with dialysis-dependent renal failure (DDFR) operated on at two first-level bariatric centers in Paris (France). All the patients were contraindicated for kidney transplantation due to the presence of morbid obesity. Results: Nine DDFR patients with a mean BMI of 45.9 kg/m² underwent LSG for the treatment of obesity. Furthermore, all patients presented with hypertension and sleep apnea and six out nine were diabetics. In the immediate postoperative period, all patients were transferred to the intensive care unit (mean stay of 2.1 days). The only major adverse event was a delayed weaning from mechanical ventilation in one patient. The mean hospital stay was 5.5 days (3-12). The total weight loss (TWL) was 27.1, 33.6, and 39.5 kg at 6, 12, and 18 months, respectively. One patient underwent renal transplantation 18 months after LSG, and the other five patients were actively listed for kidney transplantation. Conclusions: According to the results of this small sample series, LSG seems to be an effective and safe procedure in DDFR patients with concomitant obesity and can increase access to transplantation. Copyright © 2017 Springer Science+Business Media New York
Addressing the challenges of sleeve gastrectomy in end-stage renal disease: Analysis of 100 consecutive renal failure patients.
[Article In Press]
AN: 615371090

Background: While previous studies have demonstrated short-term efficacy of laparoscopic sleeve gastrectomy in candidates awaiting renal transplantation, the combination of morbid obesity and end-stage renal disease presents unique challenges to perioperative care. We demonstrate how increasing experience and the development of postoperative care guidelines can improve outcomes in this high-risk population. Methods: Single-center medical records were reviewed for renal transplantation candidates undergoing laparoscopic sleeve gastrectomy between 2011 and 2015 by a single surgeon. Postoperative care protocols were established and continually refined throughout the study period, including a multidisciplinary approach to inpatient management and hospital discharge planning. The first 100 laparoscopic sleeve gastrectomy patients were included and divided into 4 equal cohorts based on case sequence. Results: Compared with the first 25 patients undergoing laparoscopic sleeve gastrectomy, the last 25 patients had shorter operative times (97.8 +/- 27.9 min vs 124.2 +/- 33.6 min), lower estimated blood loss (6.6 +/- 20.8 mL vs 34.0 +/- 38.1 mL), and shorter hospital duration of stay (1.7 +/- 2.1 days vs 2.9 +/- 0.7 days) (P < .01 each). Readmission rates, complications, and 1-year mortality did not differ significantly. Conclusion: Increasing experience and the development of clinical care guidelines in this high-risk population is associated with reduced health care resource utilization and improved perioperative outcomes. Copyright © 2017 Elsevier Inc.
As there is no precise laboratory test or imaging study for detection of pancreas allograft rejection, there is increasing interest in obtaining pancreas tissue for diagnosis. Pancreas allograft biopsies are most commonly performed percutaneously, transcystoscopically, or endoscopically, yet pancreas transplant surgeons often lack the skills to perform these types of biopsies. We have performed 160 laparoscopic pancreas biopsies in 95 patients. There were 146 simultaneous kidney-pancreas biopsies and 14 pancreas-only biopsies due to pancreas alone, kidney loss, or extraperitoneal kidney. Biopsies were performed for graft dysfunction (89) or per protocol (71). In 13 cases, an additional laparoscopic procedure was performed at the same operation. The pancreas diagnostic tissue yield was 91.2%; however, the pancreas could not be visualized in eight cases (5%) and in 6 cases the tissue sample was nondiagnostic (3.8%). The kidney tissue yield was 98.6%. There were four patients with intraoperative complications requiring laparotomy (2.5%) with two additional postoperative complications. Half of all these complications were kidney related. There were no episodes of pancreatic enzyme leak and there were no graft losses related to the procedure. We conclude that laparoscopic kidney and
pancreas allograft biopsies can be safely performed with very high tissue yields. Copyright © 2017 The American Society of Transplantation and the American Society of Transplant Surgeons.

Status
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Institution

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107.
Improvement in severe heart failure post-successful renal transplantation: A single-centre experience with seven cases.

Aliasgari M., Alirezaei A.H., Massoudi N., Dadkhah F., Tara S.A., Fathi M.

Embase
Iranian Red Crescent Medical Journal. 19 (3) (no pagination), 2017. Article Number: e42037.

Date of Publication: March 2017.

[Article]
AN: 615099515

Heart failure is common in patients with chronic renal disease, either as a complication of renal failure or from shared risk factors, or is the major cause of death in patients on dialysis. At present, end stage renal disease (ESRD) patients who have systolic heart failure are considered high-risk for surgery; and nephrologists and cardiologists are reluctant to refer these patients for kidney transplant evaluation. It is unclear whether such patients should be accepted and
waitlisted for transplantation. Seven cases with end stage renal disease (ESRD) and severe heart failure with ejection fraction (EF) of less than 20% and New York class 3 - 4, despite being on optimal treatment, who underwent renal transplant from nonrelative living donor at Shahid Modarres hospital in Tehran, Iran during the July 2013 to December 2015, were retrospectively collected and analysed. The mean +/- SD of patient's age was 32.7 +/- 16 years, and about 72% of them were female. The left ventricle ejection fraction increased by 35% on an average after the renal transplantation. Renal transplantation significantly improved the LV systolic function and ejection fraction status and subsequently decreased the need for medical treatment and heart transplantation. Copyright © 2016, Iranian Red Crescent Medical Journal.

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108.
Anti-angiotensin II type 1 receptor autoantibodies (AT1R-AAs) in patients with systemic sclerosis: lack of association with disease manifestations.
Ilgen U., Yayla M.E., Duzgun N.
Embase
Rheumatology International. 37 (4) (pp 593-598), 2017. Date of Publication: 01 Apr 2017.
[Article]
Angiotensin II type 1 receptor autoantibodies (AT1R-AAs) are known to be associated with malignant hypertension, preeclampsia, and vascular rejection in kidney transplantation. They were also suspected to have pathogenetic role in vasculopathic changes in systemic sclerosis (SSc). Clinical data regarding AT1R-AAs in SSc are scarce. In this work, we will examine the relationship between serum levels of AT1R-AAs and disease manifestations. Serum samples from SSc patients and healthy controls were analyzed for AT1R-AAs by using a commercial ELISA kit. We examined the association of serum levels of AT1R-AA with disease duration, systolic pulmonary artery pressure (sPAP) measurements, and disease manifestations like cutaneous, lung and esophageal involvements, and the presence of digital ulcers in a cross-sectional manner. There was no statistically significant difference in levels of AT1R-AAs between SSc (n = 93) patients and healthy controls (n = 66) (p = 0.23). Serum levels of AT1R-AAs were not correlated with disease duration, sPAP measurements, and showed no association with disease manifestations like lung involvement, esophageal involvement, digital ulcers, and cutaneous fibrosis. In our SSc cohort, AT1R-AA serum levels were not different from healthy subjects and higher levels were not associated with any disease manifestation neither.

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Transplant International. 30 (4) (pp 410-419), 2017. Date of Publication: 01 Apr 2017.

[Article]
AN: 614875920

Exocrine drainage following pancreas transplantation can be achieved by drainage into the bladder or bowel, the latter typically by direct duodeno-jejunostomy; the use of Roux-en-Y enteric drainage is uncommon. We report a retrospective analysis of a single-centre experience of Roux-en-Y enteric drainage following pancreas transplantation. Over a 14-year period (2001-2015), 204 consecutive adult pancreas transplants were performed (96.6% simultaneous pancreas and kidney transplants), of which 26.0% were from donors after circulatory death (DCD). During a median follow-up of 67 months (range 13-183 months), 14 (6.9%) recipients experienced complications related to their enteric drainage. Complications during follow-up included early enteric anastomotic haemorrhage (five patients), non-anastomotic enteric bleeding (one patient), small bowel obstruction (four patients) and graft duodenal perforation (two within 6 weeks, five beyond 12 months). No recipient lost their graft as a direct result of complications related to enteric drainage. Patient and pancreas graft survival at 1 year was 99.0% and 94.0% and at 5 years 91.3% and 84.9%, respectively. We conclude that Roux-en-Y enteric drainage following pancreas transplantation is a safe and effective procedure and facilitates graft salvage in the event of graft duodenal perforation. Copyright © 2017 Steunstichting ESOT

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Relationships between clinical, self-reported, and donation specific outcomes: A prospective follow-up study 10 years after kidney donation.

Meyer K.B., Hartmann A., Mjoen G., Andersen M.H.

Embase


[Article]

AN: 614980718

Background: Long-term consequences of donor nephrectomy might be reduced kidney function, increased risk for cardiovascular disease, impaired quality of life, and fatigue. Few studies have investigated associations between clinical and self-reported outcomes in a long-term perspective. Thus, we aimed to investigate relationships between clinical, self-reported, and donation-specific outcomes in a nationwide cohort.

Material/Methods: We conducted a prospective follow-up study and assessed pre- and post-donation data from 202 donors who donated in 2001-2004. During 2012-2013, data on donors' self-reported (quality of life and fatigue) and donation-specific outcomes were collected. We performed linear regression for each component score of the generic instrument Short-Form, SF36v2, measuring quality of life, and the 5 domains of fatigue. Clinical parameters tested as independent variables were medical treatment of hyperlipidemia or hypertension, current smoking status, BMI, hemoglobin, and eGFR. Data were adjusted for age and gender.

Results: Approximately 10 years after donation, 67 donors were hypertensive and 54 donors had eGFR <60 ml/min/1.73 m2. Mean increase in plasma creatinine was 16.6 micro mol/l (SD=16.3). None of the clinical parameters were significant predictors for QoL. Female gender was significantly associated with general fatigue. There was a significant difference in perception of recognition from health personnel between donors with hypertension and donors without hypertension.

Conclusions: Our results show no associations between clinical and self-reported outcomes. However, we found a significant relationship between hypertension and donation-specific outcomes. Hypertension or reduced kidney function was identified in a minority of the donors. The increased risk for fatigue among female donors needs more investigation.

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111. Surgical prophylaxis with gentamicin and acute kidney injury: A systematic review and meta-analysis.

Srisung W., Teerakanok J., Tantrachoti P., Karukote A., Nugent K.


[Article] AN: 614855326

Gentamicin has been increasingly used instead of cephalosporins for surgical prophylaxis in an attempt to reduce the rate of "Clostridium difficile" infection. There are limited data regarding nephrotoxicity related to gentamicin in these patients. Methods: We have conducted a systematic review and meta-analysis to evaluate the risk of acute kidney injury (AKI) in gentamicin-containing surgical prophylactic regimens, compared to regimens without gentamicin, in several types of surgery. Electronic searches were performed using PubMed and Embase, including terms for "AKI, gentamicin, and surgical prophylaxis" with and without MeSH/EMTREE functions. Statistical analysis was then performed using a random-effect model; risk ratios (RR), risk differences (RD) and heterogeneity (I2) were calculated. Funnel plot was used for assessment of publication bias. Results: Eleven studies with fifteen cohorts with 18,354 patients were included in the analysis. Subgroup analysis was performed according to surgery type. We have found that antibiotic prophylaxis with gentamicin containing regimen has significant risk for developing postoperative AKI in orthopedic surgery (RR 2.99; 95% CI: 1.84, 4.88). The results were inconclusive in other types of surgery. Funnel plot indicates potential publication bias. Conclusions: Gentamicin-induced AKI is significant in patients undergoing orthopedic surgery. Physicians should consider risks and benefits of using this regimen in individual patients.

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Nonprogrammed vascular access is associated with greater mortality in patients who return to hemodialysis with a failing renal graft.

Laham G., Soler Pujol G., Vilches A., Cusumano A., Diaz C.

Embase

[Article In Press]
AN: 615089288

BACKGROUND: In incident hemodialysis (HD) patients the use of catheters is associated with a worse prognosis when compared to those with an arteriovenous fistula (AVF), but the role of vascular access (VA) type in the morbidity and mortality of patients returning to HD with a failing renal allograft is unknown. We aimed to determine the associations between the type of vascular access and mortality in this population. METHODS: This was a retrospective observational cohort study of 138 patients who initiated dialysis after kidney transplant failure between 1995 and 2014. We recorded access type, laboratory values at entry, stratified patients per risk and determined the effect on mortality of programmed vascular access (PVA), (AVF or PTFE graft) and nonprogrammed vascular access (UPVA), (tunneled or nontunneled catheters) at the initiation of HD. RESULTS: 85 (61.6 %) and 53 (38.4 %) patients initiated therapy with PVA and UPVA, respectively. Overall mortality was 14.6 % at 1 year. Patients using catheters had greater
mortality than those with a PVA (Log Rank p value <0.0001). At 24 months 7 patients died in PVA group vs. 22 in UPVA group. Multivariate Cox analysis showed that initiation of HD with a catheter (hazard ratio (HR), 5.90; 95 %, confidence interval (CI) 2.83 to 12.31) was independently associated with greater mortality after adjusting for confounders. CONCLUSION: Nonprogrammed vascular access with a catheter predicted all cause mortality among patients with transplant failure reentering HD. Copyright © 2017 Wolters Kluwer Health, Inc. All rights reserved.

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Embase
[Article]
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Background: Kidney donor outcomes are gaining attention, particularly as donor eligibility criteria continue to expand. Kidney size, a useful predictor of recipient kidney function, also likely correlates with donor outcomes. Although donor evaluation includes donor kidney size measurements, the association between kidney size and outcomes are poorly defined. Methods: We examined the relationship between kidney size (body surface area-adjusted total volume, cortical volume and length) and renal outcomes (post-operative recovery and longer-term kidney function) among 85 kidney donors using general linear models and time-to-chronic kidney disease data. Results: Donors with the largest adjusted cortical volume were more likely to achieve an estimated glomerular filtration rate (eGFR) >=60 mL/min/1.73m² over a median 24-month follow-up than those with smaller cortical volumes (P <0.001), had a shorter duration of renal recovery (1.3-2.2 versus 32.5 days) and started with a higher eGFR at pre-donation (107-110 versus 91 mL/min/1.73m²) and immediately post-nephrectomy (-63 versus 50-51 mL/min/1.73m²). Similar findings were seen with adjusted total volume and length. Conclusions: Larger kidney donors were more likely to achieve an eGFR >=60 mL/min/1.73m² with renal recovery over a shorter duration due to higher pre-donation and initial post-nephrectomy eGFRs.

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Single center experience of subclinical rejections and BK nephropathies by kidney allografts' surveillance biopsies.

Naumnik B., Kowalewska J., Hryszko T., Glowinski J., Durlik M., Mysliwiec M.C.

Embase
Advances in Medical Sciences. 62 (1) (pp 110-115), 2017. Date of Publication: 01 Mar 2017.

Purpose Acute rejection of the kidney allograft remains the most important factor affecting the long-term graft outcome and is a major predictor of development of chronic damage and graft loss. Several studies have shown that early detection and treatment of subclinical rejection episodes may be beneficial for the graft outcome. The role of protocol (surveillance) biopsies and the value of donor specific antibodies (DSA) monitoring are still debatable. Methods This is a prospective observational study involving seventeen kidney recipients transplanted in north-eastern part of Poland who underwent "zero", 3-month and 12-month allograft biopsies as well as DSA assessment. Results Histologic analysis of the biopsies showed subclinical acute cellular rejection in 17.6% of patients (two tubulointerstitial, one vascular) at 3-months post transplantation, and additional case of borderline rejection at the 12-month point. Moreover, two cases (11.8%) of polyomavirus BK nephropathy were diagnosed (one at 3 and one at 12 month point). None of the patients developed de novo DSA. Conclusions Our protocol biopsies allowed us to detect significant proportion of patients with subclinical, but histologically relevant acute cellular rejection and BK nephropathy. Early therapeutic intervention had beneficial effects in a 4-year follow up. Copyright © 2016

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115.
Ferric carboxymaltose-induced hypophosphataemia after kidney transplantation.
Embase
[Article]
AN: 614787831
Background: Ferric carboxymaltose (FCM) can induce hypophosphataemia in the general population and patients with chronic kidney disease (CKD). Less is known about the effect of FCM in the kidney transplant population. It has been suggested that fibroblast growth factor 23 (FGF-23)-mediated renal phosphate wasting may be the most likely cause of this phenomenon. In the current study, the effects of FCM on phosphate metabolism were studied in a cohort of kidney transplant recipients. Methods: Two index patients receiving FCM are described. Additionally, data of 23 kidney transplant recipients who received a single dose of FCM intravenously between 1 January 2014 and 1 July 2015 were collected. Changes in the serum phosphate concentration were analysed in all subjects. Change in plasma FGF-23 concentrations was analysed in the index patients. Results: In the two index patients an increase in FGF-23 and a decrease in phosphate concentrations were observed after FCM administration. In the 23 kidney transplant patients, median estimated glomerular filtration rate was 42 ml/min/1.73 m² (range 10-90 ml/min/1.73 m²). Mean phosphate concentration before and after FCM administration was 1.05 +/- 0.35 mmol/l and 0.78 +/- 0.41 mmol/l, respectively (average decrease of 0.27 mmol/l; p = 0.003). In the total population, 13 (56.5%) patients showed a transient decline in phosphate concentration after FCM administration. Hypophosphataemia following FCM administration was severe (i.e. < 0.5 mmol/l) in 8 (34.8%) patients. Conclusion: Administration of a single dose of FCM may induce transient and mostly asymptomatic renal phosphate wasting and hypophosphataemia in kidney transplant recipients. This appears to be explained by an
increase in FGF-23 concentration. Copyright © Van Zuiden Communications B.V. All rights reserved.

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116.
Territo A., Mottrie A., Abaza R., Rogers C., Menon M., Bhandari M., Ahlawat R., Breda A.
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Minerva Urologica e Nefrologica. 69 (1) (pp 5-13), 2017. Date of Publication: February 2017.
[Review]
AN: 614691283
Introduction: For the treatment of patients with end-stage renal disease, kidney transplantation is preferred to renal replacement modalities such as hemodialysis and peritoneal dialysis. Although open surgery remains the gold standard, minimally invasive approaches have recently been applied in transplant kidney surgery. Despite growing enthusiasm and potential benefits of robotic kidney transplant, many aspects of this novel technique remain controversial. Aim of this study was to analyze the current status and future developments in robotic-assisted surgery for kidney
transplantation. Evidence Acquisition: A systematic PubMed search for peer-reviewed studies was performed using keywords such as "Minimally invasive surgery" or "Robotic" or "Robot assisted" AND "Kidney transplantation". Eligible articles were reviewed according to the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) criteria. Evidence Synthesis: Eleven studies evaluated reported the feasibility, safety and reproducibility of robotic kidney transplantation using either a transperitoneal or an extraperitoneal approach. The graft kidney is usually introduced via a periumbilical or Gibson incision. The functional outcomes of the robotic approach are equivalent to those of open kidney transplantation in terms of mean serum creatinine at 6 month and delayed graft function. The benefits of robotic kidney transplantation include easier vascular anastomosis, better cosmetic results, and a lower complication rate, including in the obese population. Many concerns remain over the potential impairment of graft function due to pneumoperitoneum and warm ischemia and the technical difficulties related to the vascular anastomosis. Refinement of the robotic tactile feedback and development of a cold ischemia device may lead to further improvement in this novel technique. Conclusions: Robotic surgery allows kidney transplantation to be performed under optimal operative conditions, reducing complications while maintaining the functional results achieved by the open approach. The evolution of this technique is in progress. Copyright © 2017 Edizioni Minerva Medica.

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The risk of cardiovascular disease is not increasing over time despite aging and higher comorbidity burden of kidney transplant recipients.


[Article]

AN: 609137672

Background. Cardiovascular death remains the leading cause of mortality in kidney transplant recipients. Cardiovascular events are associated with significant morbidity. However, current trends in cardiovascular events after kidney transplantation are poorly understood. Methods. We conducted a retrospective study using healthcare databases in Ontario, Canada, to determine whether the incidence of cardiovascular events after kidney transplantation has changed from 1994 to 2009. Our primary endpoint was a 3-year composite outcome of posttransplant death or major cardiovascular event (myocardial infarction, coronary angioplasty, coronary artery bypass graft surgery, stroke). Results. Recipients (n = 4954) were older and had more baseline comorbidity in recent years. A total of 445 recipients (9.0%) died or experienced a major cardiovascular event within 3 years of transplantation. There was no significant change in the incidence of the composite outcome or death-censored cardiovascular events over time (P = 0.41 and 0.92, respectively). After adjusting for age, sex, and comorbidities, the risk of death or major cardiovascular event steadily declined across the years of transplant (2006-2009 adjusted hazard ratio, 0.70; P = 0.009; referent 1994-1997). When recipients were matched on age, sex, and date of cohort entry to members of the general population and to the chronic kidney disease population, the risk was lowest in the general population and highest in the chronic kidney disease population. Conclusion. Despite transplant centers accepting recipients who are older with more comorbidities in recent years, the 3-year cumulative incidence of death or major cardiovascular event has remained stable over time.

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Nephrectomy-induced reduced renal function and the health-related quality of life of living kidney donors.


Embase
Clinical Transplantation. 31 (3) (no pagination), 2017. Article Number: e12910. Date of Publication: 01 Mar 2017.

[Article]
AN: 614537296

Objective: To evaluate the health impact of nephrectomy on living kidney donors (LKDs) by comparing the health-related quality of life (HrQOL) scores measured by Short Form-36 (SF36)
between those with and without postdonation renal function impairment (PRFI). Methods: Eighty-two LKDs (47 females, mean age=50.2+/-11.2 years) were prospectively recruited to participate in a SF-36 HrQOL survey. Chart review, individual baseline, and postoperative renal function (eGFR) was determined using the Modification of Diet in Renal Disease formula. PRFI was defined as eGFR<60 mL/min/1.73 m2 or proteinuria. Mean SF-36 domain scores were compared between those with and without PRFI. Results: After a median follow-up of 5.7 years, the prevalence of postdonation comorbidities was 29.3% (n=24) PRFI, 25.6% (n=21) hypertension, 6.1% (n=5) diabetes, and 3.7% (n=3) heart disease, and no LKDs developed end-stage renal disease. Mean eGFR before and after donor nephrectomy was 95.5+/-23.4 and 71.0+/-17.3 mL/min/1.73 m2 (P<.01). Mean SF-36 scores of LKDs were not significantly different between those with and without PRFI in all the domains (all P>.05). Similarly, the proportion of LKDs with PRFI did not differ significantly between the patients with SF-36 domain scores above and below the published reference values. Conclusion: Nephrectomy-induced PRFI may not have a significant impact on the HrQOL of the LKD population with a low proportion of other major comorbidities such as diabetes and ischemic heart disease.
The presence of pretransplant antiphospholipid antibodies Iga anti-b-2-glycoprotein i as a predictor of graft thrombosis after renal transplantation.


Embase Transplantation. 101 (3) (pp 597-607), 2017. Date of Publication: 2017. [Article]

AN: 610257717

Background. Vessel thrombosis is a severe complication after renal transplantation. Antibodies anti-2 glycoprotein-I of IgA isotype (IgA-aB2GP1) have been linked to thrombotic events and mortality in hemodialysis patients. Methods. All kidney transplanted patients from 2000 to 2011 (n = 1375) in our hospital were followed up for 2 years, evaluating 3 time periods. Results. At transplantation, 401 patients were positive for IgA-aB2GP1 (29.2%, group 1), and the remaining patients were negative (group 2). Graft loss at 6 months posttransplantation was higher in group 1 (18% vs 7.2%; P < 0.001). The most frequent cause of early graft loss was vessel thrombosis, especially in group 1 (12.2% vs 2.6% of patients; P < 0.001). In fact, vessel thrombosis was the most important cause of graft loss in the 3 time periods, irrespective of demographic changes and introduction of transplantation with asystolic donors. Notably, IgA-aB2GP1 was an independent risk factor for graft thrombosis (odds ratio, 5.047; P < 0.001). Furthermore, the presence of IgA-aB2GP1 was associated with early graft loss and delayed graft function. Mortality at 24 months was also higher in group 1. Conclusions. In conclusion, pretransplant IgA-aB2GP1 was the main risk factor for graft thrombosis and early graft loss. Further research should be made on whether anticoagulation in antibody-positive patients could ameliorate this catastrophic complication.

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Abdominal wall blocks rely on the spread of local anesthetic within musculofascial planes to anesthetize multiple small nerves or plexuses, rather than targeting specific nerve structures. Ultrasonography is primarily responsible for the widespread adoption of techniques including transversus abdominis plane and rectus sheath blocks, as well as the introduction of novel techniques such as quadratus lumborum and transversalis fascia blocks. These blocks are technically straightforward and relatively safe and reduce pain and opioid requirements in many clinical settings. The data supporting these outcomes, however, can be inconsistent because of heterogeneity of study design. The extent of sensory blockade is also somewhat variable, because it depends on the achieved spread of local anesthetic and the anatomical course of the nerves being targeted. The blocks mainly provide somatic analgesia and are best used as part of a multimodal analgesic regimen. This review summarizes the anatomical, sonographic, and technical aspects of the abdominal wall blocks in current use, examining the current evidence for the efficacy and safety of each. Copyright © 2017 American Society of Regional Anesthesia and Pain Medicine.
Dual kidney transplantation: Is it worth it?.
Snanoudj R., Timsit M.-O., Rabant M., Tinel C., Lazareth H., Lamhaut L., Martinez F., Legendre C.

Embase
[Review]
AN: 612816628

Use of expanded criteria donor (ECD) kidneys, which are associated with a reduced graft survival rate, has become widely adopted in elderly recipients in an old-to-old allocation system. However, the results are frequently unsatisfactory, and a high proportion of these ECD kidneys are discarded. Dual kidney transplantation (DKT) is an underused way to expand the pool of ECD kidneys and to rapidly transplant elderly patients with satisfactory results because of the transplantation of double the nephronic mass. In this overview, we summarize the results of the main studies on DKT. DKT suffers from prejudice of heaviness and is considered to be useless by transplant centers that do not perform it. The literature is often biased by the heterogeneity of the criteria leading to a DKT and the common refusal of kidneys that are judged too marginal. In fact, we show that when strictly allocated according to reliable clinical or...
histological scores, dual and single ECD transplantations yield similar results in terms of patient and graft survival rates despite significant differences in donors’ characteristics. DKTs are not associated with a higher proportion of surgical complications, except in some studies showing thrombosis of 1 of the 2 grafts. The benefits of dual transplantation are particularly evident for kidneys coming from most ECDs. There is still a need for more studies to find the best allocation criteria that would permit transplantation to the highest number of patients with similar outcomes in recipients of single and dual ECD kidneys. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.

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122.
Predonation Prescription Opioid Use: A Novel Risk Factor for Readmission After Living Kidney Donation.
Implications of opioid use in living kidney donors for key outcomes, including readmission rates after nephrectomy, are unknown. We integrated Scientific Registry of Transplant Recipients data with records from a nationwide pharmacy claims warehouse and administrative records from an academic hospital consortium to quantify predonation prescription opioid use and postdonation readmission events. Associations of predonation opioid use (adjusted odds ratio [aOR]) in the year before donation and other baseline clinical, procedural, and center factors with readmission within 90 days postdonation were examined by using multivariate logistic regression. Among 14,959 living donors, 11.3% filled one or more opioid prescriptions in the year before donation. Donors with the highest level of predonation opioid use (>305 mg/year) were more than twice as likely as nonusers to be readmitted (6.8% vs. 2.6%; aOR 2.49, 95% confidence interval 1.74-3.58). Adjusted readmission risk was also significantly (p < 0.05) higher for women (aOR = 1.25), African Americans (aOR = 1.45), spouses (aOR = 1.42), exchange participants (aOR = 1.46), uninsured donors (aOR = 1.40), donors with predonation estimated glomerular filtration rate <60 mL/min/1.73 m2 (aOR = 2.68), donors with predonation pulmonary conditions (aOR = 1.54), and after robotic nephrectomy (aOR = 1.68). Predonation opioid use is independently associated with readmission after donor nephrectomy. Future research should examine underlying mechanisms and approaches to reducing risks of postdonation complications. © Copyright 2016 The American Society of Transplantation and the American Society of Transplant Surgeons
The Impact of Anastomosis Time During Kidney Transplantation on Graft Loss: A Eurotransplant Cohort Study.
Heylen L., Pirenne J., Samuel U., Tieken I., Naesens M., Sprangers B., Jochmans I.
Embase
[Article]
AN: 612634897
Recent studies raised the concern that warm ischemia during completion of vascular anastomoses in kidney implantation harms the transplant, but its precise impact on outcome and its interaction with other risk factors remain to be established. We investigated the relationship between anastomosis time and graft survival at 5 years after transplantation in 13,964 recipients of deceased donor solitary kidney transplants in the Eurotransplant region. Anastomosis time was independently associated with graft loss after adjusting for other risk factors (adjusted hazard ratio [HR] 1.10 for every 10-min increase, 95% confidence interval [CI] 1.06-1.14; p < 0.0001), whereas it did not influence recipient survival (HR 1.00, 95% CI 0.97-1.02). Kidneys from donation after circulatory death (DCD) were less tolerant of prolonged anastomosis time than
kidneys from donation after brain death \((p = 0.02\) for interaction). The additive effect of anastomosis time with donor warm ischemia time (WIT) explains this observation because DCD status was no longer associated with graft survival when adjusted for this summed WIT, and there was no interaction between DCD status and summed WIT. Time to create the vascular anastomoses in kidney transplantation is associated with inferior transplant outcome, especially in recipients of DCD kidneys. © Copyright 2016 The American Society of Transplantation and the American Society of Transplant Surgeons

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124.
Should hand-assisted retroperitoneoscopic nephrectomy replace the standard laparoscopic technique for living donor nephrectomy? A meta-analysis.
Elmaraezy A., Abushouk A.I., Kamel M., Negida A., Naser O.
Embase
Objective We performed this meta-analysis to compare hand-assisted retroperitoneoscopic (HARP) and traditional laparoscopic (TLS) techniques for living donor nephrectomy. Methods We searched PubMed, Cochrane Central, EMBASE, and Web of science for prospective studies, comparing HARP and TLS techniques. Data were extracted from eligible studies and pooled as risk ratios (RR) or standardized mean difference (SMD), using RevMan software (version 5.3 for windows). We performed a sensitivity analysis to test the robustness of our evidence and a subgroup analysis to stratify intraoperative complications on Clavien-Dindo score. Results Seven studies (498 patients) were included in the final analysis. HARP was superior to TLS in terms of shortening the operative duration (SMD = -0.84, 95% CI [-1.18 to -0.50]) and warm ischemia time (SMD = -0.93, 95% CI [-1.13 to -0.72]). There was no significant difference between HARP and TLS in terms of blood loss (SMD = 0.13, 95% CI [-0.50 to 0.76]), hospital stay (SMD = -0.27, 95% CI [-0.70 to 0.15]) or graft survival (RR = 0.97, 95% CI [0.92 to 1.02]). The overall risk ratio of intraoperative complications did not differ significantly between the two groups (RR = 0.62, 95% CI [0.31 to 1.21]). Conclusion Our meta-analysis shows that HARP was associated with a shorter surgery duration and less warm ischemia time than TLS. However, no significant differences were found between the two groups in terms of graft survival or intraoperative complication rates. We recommend HARP over TLS for living donor nephrectomy; however, future studies with larger sample sizes are recommended to compare both techniques in terms of operative safety and quality of life outcomes.

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Little is known about the actual kidney graft temperature during the 2nd warm ischemia time (WIT2). We aimed to determine the actual temperature course of the WIT2, with emphasis on the 15 degreeC metabolic threshold. Data of 152 consecutive adult living donor kidney transplantations were collected. The mean WIT2 was 41.3 +/- 10.1 (SD) minutes with a temperature of 5.4 degreeC at baseline which gradually increased to 13.7, 17.4, and 20.2 degreeC after 10, 20, and 30 min, respectively. The percentage of kidneys with a temperature of 15 degreeC or higher was 81.2% after 20 min and 97.5% after 30 min. Duration of surgery (95% CI: -0.017 to -0.002, P = 0.02), multiple veins (95% CI: 0.0003-2.720, P = 0.05) and WIT2 (95% CI: 0.016-0.099, P = 0.006) were associated with a rapid temperature increase. No correlation could be determined between a rapid temperature rise and diminished graft function. This study showed a rapid increase in kidney temperature during WIT2, wherein the 15 degreeC threshold was reached within 20 min in more than 80% of the patients. Copyright © 2016 Steunstichting ESOT
Ureteral stent placement and immediate graft function are associated with increased risk of BK viremia in the first year after kidney transplantation.


Embase
Transplant International. 30 (2) (pp 153-161), 2017. Date of Publication: 01 Feb 2017.

[Article]
AN: 613930649

Ureteral stent (UrSt) placement has been shown to be a significant independent risk factor for BK viruria, viremia, and BK virus nephropathy. We assessed whether this observation could be validated at our high volume kidney transplant center that has had a strong historical focus on BK virus nephropathy detection. We performed a retrospective case-control study of adults receiving a kidney-only transplant and followed for 1 year between 2004 and 2011 with uniform immunosuppression and use of blood BK virus PCR screening protocol. Among 1147 patients, 443 (38.6%) received a UrSt and 17.2% with a UrSt had BK viremia versus 13.5% without stent (odds ratio 1.33; 95% CI: 1.00-1.78). We confirmed a previously reported association between immediate graft function (IGF) and higher rate of BK viremia (15.7% vs. 5.9% in patients without IGF). On multivariable competing risks Cox regression in patients with IGF, UrSt (adjusted hazard ratio [aHR] 1.35; 95% CI: 1.04-1.75) and African American race (aHR 1.47; 95% CI: 1.04-2.09) significantly increased the risk for BK viremia. In the largest sample size to date, we confirmed that UrSt placement during kidney transplant surgery is a risk factor for BK viremia within the first year post-transplant and that IGF is associated with BK viremia. Copyright © 2016

Steunstichting ESOT

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Minimally Invasive, Laparoscopic, and Robotic-assisted Techniques Versus Open Techniques for Kidney Transplant Recipients: A Systematic Review.


Eur Urol.


[Article In Press]

AN: 614661137

Context: Literature on conventional and minimally invasive operative techniques has not been systematically reviewed for kidney transplant recipients. Objective: To systematically evaluate, summarize, and review evidence supporting operating technique and postoperative outcome for kidney transplant recipients. Evidence acquisition: A systematic review was conducted in PubMed-Medline, Embase, and Cochrane Library between 1966 up to September 1, 2016, according to Preferred Reporting Items for Systematic Review and Meta-analysis guidelines. Articles were included and scored by two independent reviewers using Group Reading Assessment and Diagnostic Evaluation (GRADE), Newcastle-Ottawa Quality Assessment Scale.
(NOS), and Oxford guidelines for level of evidence. Main outcomes were graft survival, surgical site infection, incisional hernia, and cosmetic result. In total, 18 out of 1954 identified publications were included in this analysis. Evidence synthesis: Included reports described conventional open, minimally invasive open, laparoscopic, and robotic-assisted techniques. General level of evidence of included studies was low (GRADE: 1-3; NOS: 0-4; and Oxford level of evidence: 4-2). No differences in graft or patient survival were found. For open techniques, Gibson incision showed better results than the hockey-stick incision for incisional hernia (4% vs 16%), abdominal wall relaxation (8% vs 24%), and cosmesis. Minimally invasive operative recipient techniques showed lowest surgical site infection (range 0-8%) and incisional hernia rates (range 0-6%) with improved cosmetic result and postoperative recovery. Disadvantages included prolonged cold ischemia time, warm ischemia time, and total operation time. Conclusions: Although the level of evidence was generally low, minimally invasive techniques showed promising results with regard to complications and recovery, and could be considered for use. For open surgery, the smallest possible Gibson incision appeared to yield favorable results. Patient summary: In this paper, the available evidence for minimally invasive operation techniques for kidney transplantation was reviewed. The quality of the reviewed research was generally low but suggested possible advantages for minimally invasive, laparoscopic, and robot-assisted techniques. The general level of evidence of articles included in this systematic review was low. Minimally invasive techniques showed promising results with regard to complications and recovery. For open surgery, the smallest possible Gibson incision appeared to yield favorable results. Copyright © 2017 European Association of Urology.
Eculizumab in Transplant-Associated Thrombotic Microangiopathy.
Dhakal P., Giri S., Pathak R., Bhatt V.R.
Embase
Clinical and Applied Thrombosis/Hemostasis. 23 (2) (pp 175-180), 2017. Date of Publication: 01 Mar 2017.
[Article]
AN: 614342961
Introduction: Transplant-associated thrombotic microangiopathy (TA-TMA) is a rare entity with no standard of care and high mortality, despite the use of plasma exchange. Methods: Using specific search terms, all cases having TA-TMA treated with eculizumab and indexed in MEDLINE (English language only) by November 2014 were reviewed. Results: A total of 26 cases, 53% men, had a median age of 33 years (range 2-61). Transplant-associated thrombotic microangiopathy occurred after stem-cell transplant (35%) or solid-organ transplant (65%), frequently associated with the use of cyclosporine or tacrolimus (96%). A disintegrin and metalloproteinase with a thrombospondin type 1 motif, member 13 (ADAMTS 13) level was always >10%. After TA-TMA diagnosis, the following drug adjustments were made: discontinuation of cyclosporine or tacrolimus in 45%, dose reduction in another 27%, continuation of the drugs in 23%, and switch from cyclosporine to tacrolimus in remaining 5%. Plasma exchange was performed in 1/443%. The median interval between transplant and initiation of eculizumab was 63 days (range 11-512). A median of 5.5 doses (range 2-21) of eculizumab was utilized with 92% response occurring after a median of 2 doses (range 1-18). At a median follow-up of 52 weeks (range 3-113), the survivors (92%) were doing well. Conclusion: Within the limits of this retrospective analysis, our study demonstrates that eculizumab use may result in high response rate and 1-year survival in patients with TA-TMA refractory to discontinuation of calcineurin inhibitor and plasma exchange. Copyright © The Author(s) 2015.
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129.
Ureteral stent duration and the risk of BK polyomavirus viremia or bacteriuria after kidney transplantation.
Wingate J.T., Brandenberger J., Weiss A., Scovel L.G., Kuhr C.S.
Embase
[Article]
AN: 614328620
Objectives: Ureteral stents are used in kidney transplantation (KTX) to decrease post-operative complications, but they are associated with BK polyomavirus viremia (BKV). Our primary outcome was to determine the association between ureteral stent duration and BKV. Secondary outcome measures were the association between bacteriuria and stent duration or use of ureteral stent strings. Methods: Between January 2010 and January 2015, 403 patients underwent KTX at the Virginia Mason Medical Center and met inclusion criteria. Stent duration was classified as short (<3 weeks) or long (>3 weeks). Multivariate logistic regression models were created to assess for factors associated with BKV. The covariates in the BKV model were chosen a priori based on stent duration and risk factors previously described in the literature. Results: Ureteral stents were placed in 304 (75.4%) transplants. Stent strings were left attached in 166 (54.6%) patients. On multivariate analyses, long stent duration was significantly associated with increased risk of BKV compared with no stent (odds ratio [OR] 1.92, P=.044, 95% confidence interval [CI] 1.04-3.74). Short stent duration was not associated with BKV. Sixty-two (15.4%) patients had bacteriuria. Bacteriuria was associated with female gender (OR 2.77, P<.001, 95% CI 1.58-4.95), and there
was a dose-dependent effect with stent duration compared with no stent-short duration (OR 2.46, P=.049, 95% CI 1.05-6.49) and long duration (OR 3.58, P=.004, 95% CI 1.58-9.25). Stent strings were not associated with either complication. Conclusions: The association between ureteral stents and BKV may be dose dependent. Copyright © 2016 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd

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130.
Medication adherence in randomized controlled trials evaluating cardiovascular or mortality outcomes in dialysis patients: A systematic review.
Murali K.M., Mullan J., Chen J.H.C., Roodenrys S., Lonergan M.

Embase
BMC Nephrology. 18 (1) (pp 1-11), 2017. Date of Publication: 31 Jan 2017.

[Article]
AN: 614251868

Background: Medication non-adherence is common among renal dialysis patients. High degrees of non-adherence in randomized controlled trials (RCTs) can lead to failure to detect a true treatment effect. Cardio-protective pharmacological interventions have shown no consistent benefit in RCTs involving dialysis patients. Whether non-adherence contributes to this lack of efficacy is unknown. We aimed to investigate how medication adherence and drug
discontinuation were assessed, reported and addressed in RCTs, evaluating cardiovascular or mortality outcomes in dialysis patients. Methods: Electronic database searches were performed in MEDLINE, EMBASE & Cochrane CENTRAL for RCTs published between 2005-2015, evaluating self-administered medications, in adult dialysis patients, which reported clinical cardiovascular or mortality endpoints, as primary or secondary outcomes. Study characteristics, outcomes, methods of measuring and reporting adherence, and data on study drug discontinuation were analyzed. Results: Of the 642 RCTs in dialysis patients, 22 trials (12 placebo controlled), which included 19,322 patients, were eligible. The trialed pharmacological interventions included anti-hypertensives, phosphate binders, lipid-lowering therapy, cardio-vascular medications, homocysteine lowering therapy, fish oil and calcimimetics. Medication adherence was reported in five trials with a mean of 81% (range: 65-92%) in the intervention arm and 84.5% (range: 82-87%) in the control arm. All the trials that reported adherence yielded negative study outcomes for the intervention. Study-drug discontinuation was reported in 21 trials (mean 33.2%; 95% CI, 22.0 to 44.5, in intervention and 28.8%; 95% CI, 16.8 to 40.8, in control). Trials with more than 20% study drug discontinuation, more often yielded negative study outcomes (p = 0.018). Non-adherence was included as a contributor to drug discontinuation in some studies, but the causes of discontinuation were not reported consistently between studies, and non-adherence was listed under different categories, thereby potentiating the misclassification of adherence. Conclusions: Reporting of medication adherence and study-drug discontinuation in RCTs investigating cardiovascular or mortality endpoints in dialysis patients are inconsistent, making it difficult to compare studies and evaluate their impact on outcomes. Recommendations for consistent reporting of non-adherence and causes of drug discontinuation in RCTs will therefore help to assess their impact on clinical outcomes. Copyright © 2017 The Author(s).
Cystatin-C is associated with partial recovery of kidney function and progression to chronic kidney disease in living kidney donors.
Embase
[Article]
AN: 614513536
Donor nephrectomy in living-donor kidney transplantation may result in hyperfiltration injury in remnant kidney; however, its clinical implication in partial recovery of kidney function (PRKF) in remnant kidney and chronic kidney disease (CKD) progression remains unclear. Thus, we investigated the effect of PRKF on CKD development in the residual kidney and the utility of cystatin-C (Cys-C) in evaluating renal function in living-donor kidney transplantation donors. The electronic medical records and laboratory results of 1648 kidney transplant (KT) donors and 13,834 healthy nondonors between January 2006 and November 2014 were reviewed. The predictors of PRKF and CKD diagnosed by Kidney Disease: Improving Global Outcomes (KDIGO) criteria were evaluated by multivariate analysis. CKD risk was compared between KT donors and healthy nondonors using Cox proportional hazard regression analysis following propensity score matching (PSM). The incidence of PRKF for KT donors was 49.3% (813). CKD incidence was 24.8% (408) in KT donors and 2.0% (277) in healthy nondonors. The predictors of PRKF were, male sex (odds ratio [OR], 17.32; 95% confidence interval [CI] 9.16-32.77), age (OR, 1.02; 95% CI, 1.00-1.04; P<0.001), Cys-C concentration (OR, 1.02; 95% CI, 1.00-1.04; P=0.02), and preoperative albumin level (OR, 0.49; 95% CI, 0.27-0.89; P=0.02). The predictors of CKD were age (hazards ratio [HR], 1.04; 95% CI, 1.02-1.05; P<0.001), Cys-C concentration (HR, 1.024; 95% CI, 1.012-1.037; P<0.001), and PRKF (HR, 1.41; 95% CI, 1.04-1.92; P=0.03). After PSM, the risk of progression to CKD was higher in KT donors than in healthy nondonors (HR, 58.4; 95% CI, 34.2-99.8; P<0.001). Donor nephrectomy is associated with PRKF and progression to CKD. Cys-C is a useful early marker for detecting PRKF and CKD. Copyright © 2017 the Author(s). Published by Wolters Kluwer Health, Inc.
Increase in CD8+CD158a+ T cells in kidney graft blood is associated with better renal function. Caballero A., Palma E., Ruiz-Esteban P., Sola E., Lopez V., Fuentes L., Rudas E., Perea L., Hernandez D.

[Article]
AN: 614226427

Background: Studies of liver and heart transplant patients have shown a gradual reconstruction of the CD8 KIR2D+ T cell subpopulations, measured in peripheral blood (PB), associated with better graft acceptance. The kinetics of these populations in kidney transplants, however, is still poorly understood, especially given the lack of studies of blood samples from the kidney graft.

Material/Methods: Flow cytometry was used to measure CD8+CD158a/b/e T cells in 69 kidney transplant patients who had stable renal function during follow-up. Measurements were made at 3, 6, and 12 months post-transplantation in graft capillary blood extracted by fine needle aspiration puncture (FNAP) and in PB. Results: No progressive increase was found in the PB subpopulations. However, the CD8+CD158a+ subsets increased significantly at 12 months in the graft blood versus the PB samples (3.91+/−4.59 vs. 2.84+/−4.71; p=0.021). The ratio of the percentage of CD8+CD158a+ cells in graft blood compared to PB at 12 months was associated with better renal function in those patients with a ratio >=3 (66.6+/−14.53 vs. 55.7+/−21.6;
Conclusions: An increased ratio of CD8+CD158a+ cells, measured by flow cytometry, between graft blood and PB was associated with improved renal function. Copyright © Ann Transplant, 2017.

INTRODUCTION: To summarize the association of vitamins (B6, B12, C, D, and E) and abdominal aortic aneurysm (AAA), we reviewed clinical studies with a comprehensive literature research and meta-analytic estimates. EVIDENCE ACQUISITION: To identify all clinical studies evaluating the association of vitamins B6/B12/C/D/E and AAA, databases including MEDLINE, EMBASE, and the Cochrane Central Register of Controlled Trials were searched through April 2015, using Web-based search engines (PubMed and OVID). For each case-control study, data regarding vitamin levels in both the AAA and control groups were used to generate standardized mean differences (SMDs) and 95% confidence intervals (CIs). EVIDENCE SYNTHESIS: Pooled
analyses of the 4 case-control studies demonstrated significantly lower circulating vitamin B6 levels (SMD, -0.33; 95% CI, -0.55 to -0.11; P=0.003) but non-significantly lower vitamin B12 levels (SMD, -0.42; 95% CI, -1.09 to 0.25; P=0.22) in patients with AAA than subjects without AAA. Pooled analyses of the 2 case-control studies demonstrated significantly lower levels of circulating vitamins C (SMD, -0.71; 95% CI, -1.23 to -0.19; P=0.007) and E (SMD, -1.76; 95% CI, -2.93 to 0.60; P=0.003) in patients with AAA than subjects without AAA. Another pooled analysis of the 3 case-control studies demonstrated significantly lower circulating Vitamin D (25-hydroxyVitamin D) levels (SMD, -0.25; 95% CI, -0.50 to -0.01; P=0.04) in patients with AAA than subjects without AAA. In a double-blind controlled trial, 4.0-year treatment with a high-dose folic acid and vitamin B6/B12 multivitamin in kidney transplant recipients did not reduce a rate of AAA repair despite significant reduction in homocysteine level. In another randomized, double-blind, placebo-controlled trial, 5.8-year supplementation with alpha-tocopherol (Vitamin E) had no preventive effect on large AAA among male smokers. CONCLUSIONS: In clinical setting, although low circulating vitamins B6/C/D/E (not B12) levels are associated with AAA presence, vitamins B6/B12/E supplementation may not reduce AAA incidence. Copyright © 2015 EDIZIONI MINERVA MEDICA.

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134.
Anonymous
The authors would like to correct some printing errors in the publication of the article. The corrected details are given below for your reading:

1. The last paragraph under the heading "Ureteral obstruction" should read: "At our center, we have performed 4 revisions after ureteral strictures. Figure 14 shows the same patients at postoperative 6-month evaluations. In the other patient, we performed end-to-side anastomosis between the graft's ureter and native ureter."

2. The title for Figure 14(A-D) should read: "6-Month Posttransplant Tomography Images of Patients With Native Nephrectomy and End-to-Side Anastomosis Between Native Ureter and Graft's Renal Pelvis."

Copyright © Baskent University 2017 Printed in Turkey. All Rights Reserved.
hernias after renal transplant. The existence of associations between these risk factors and postoperative complications was also reviewed. Materials and Methods: We reviewed 969 kidney transplants performed between February 2000 and January 2011. Thirty-nine kidney transplant recipients who were treated with rapamycin were excluded. The following potential risk factors were evaluated: recipient age, sex, body mass index at transplant, delayed graft function, diabetes, albumin, postoperative platelet count, drain placement, donor body mass index, donor type, warm ischemic time, and cold ischemic time. We performed univariate and multivariate logistic regression tests. Results: In our patient group, a total of 52 (5.4%) transplants were complicated by incisional hernia. On univariate analysis, we found that delayed graft function (P = .001) and infection (P < .001) were statistically significant predictors for development of incisional hernia. Multivariate analyses revealed that delayed graft function and length of stay remained statistically significant predictors. Conclusions: Delayed graft function and length of stay are significant predictors of incisional hernia after kidney transplant. Copyright © Baskent University 2017 Printed in Turkey. All Rights Reserved.

The United Network for Organ Sharing recommends that fellowship-trained surgeons participate in 15 laparoscopic donor nephrectomy (LDN) procedures to be considered proficient. The American Society of Transplant Surgeons (ASTS) mandates 12 LDNs during an abdominal transplant surgery fellowship. We performed a retrospective intraoperative case analysis to create a risk-adjusted cumulative summation (RACUSUM) model to assess the learning curve of novice transplant surgery fellows (TSFs). Between January 2000 and December 2014, 30 novice TSFs participated in the organ procurement rotation of our ASTS-approved abdominal transplant surgery fellowship. Measures of surgical performance included intraoperative time, estimated blood loss, and incidence of intraoperative complications. The performance of senior TSFs was used to benchmark novice TSF performance. Scores were tabulated in a learning curve model, adjusting for case complexity and prior TSF case volume. Rates of adverse surgical events were significantly higher for novice TSFs than for senior TSFs. In univariable analysis, multiple renal arteries, high BMI, prior abdominal surgery, male donor, and nephrolithiasis were correlated with higher incidence of adverse surgical events. Based on the RACUSUM model, high intraoperative time is mitigated after 28 procedures, incidence of intraoperative complications tends to diminish after 24 procedures, and improvement in estimated blood loss did not remain consistent. TSFs exhibit a tipping point in LDN performance by 24-28 cases and proficiency by 35-38 cases.

Copyright © 2017 The American Society of Transplantation and the American Society of Transplant Surgeons.
Laparoscopic sleeve gastrectomy: Gateway to kidney transplantation.

Kienzl-Wagner K., Weissenbacher A., Gehwolf P., Wykypiel H., Ofner D., Schneeberger S.

Embase

Surgery for Obesity and Related Diseases. (no pagination), 2017. Date of Publication: August 23, 2016.

[Article In Press]

AN: 614460825

Background: The prevalence of obesity and obesity-related morbidity in end-stage renal disease patients is rising. Although it is established that obesity does not abrogate the transplant benefit with respect to lower long-term mortality and cardiovascular risk, it is associated with increased graft failure, delayed graft function, surgical complications, prolonged hospital stay, and costs.

Objectives: To examine the safety and efficacy of LSG (laparoscopic sleeve gastrectomy) in renal transplant candidates and evaluate transplant outcomes.

Setting: Single-center prospective nonrandomized trial.

Methods: We here report on a prospective single-center trial establishing a 2-step approach for obese renal transplant candidates. Patients with end-stage renal disease and a BMI (body mass index) of 35 kg/m2 or higher underwent laparoscopic sleeve gastrectomy. After reaching a BMI of <35 kg/m2, patients were waitlisted for kidney transplantation.

Age, gender, body mass index (BMI), associated co-morbidities, cause of end-stage renal disease, surgical complications, and outcome after kidney transplantation (graft survival, incidence of delayed graft function, incidence of rejection, serum creatinine) were collected.

Results: LSG was performed in 8 renal transplant candidates with a mean BMI of 38.8 kg/m2 each. BMI dropped to below 35 kg/m2 within a median of 3 months. Percent excess body mass index loss (%EBMIL) was 62.7% at 1 year after LSG. Within 17 months (mean) after metabolic surgery, 7 patients underwent kidney transplantation. All transplants were successful with a serum creatinine of 1.9+/-.8 mg/dL at discharge and stable allograft function thereafter. Mean follow-up was 3.2+/-.1.4 years; no patient was lost to follow-up.

Conclusion: LSG is safe and efficacious for treatment of obesity in renal transplant candidates. Rapid and sustained weight loss and subsequent waitlisting for kidney transplantation may reduce overall and in particular posttransplant patient morbidity.

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Status

ARTICLE IN PRESS

Institution
Background. Calcific uraemic arteriolopathy (calciphylaxis) is an unusual and potentially fatal condition characterised by small-vessel calcification and ischaemic skin necrosis. It mainly affects patients with end-stage renal disease (ESRD) on haemodialysis, but may rarely occur in the absence of ESRD in conditions such as primary hyperparathyroidism, malignancy, alcoholic liver disease and connective tissue disease. Methods. We reviewed the records of all patients diagnosed with calciphylaxis while on renal replacement therapy at Tygerberg Hospital, Cape Town, South Africa, between 1990 and 2014, to describe its presentation, course and final outcome. Results. Nineteen patients developed calciphylaxis over this period. Their median age was 34 years and 13 (68.4%) were female. Fifteen (78.9%) had received a kidney transplant. All patients had painful skin lesions that rapidly progressed to infarction. Small-vessel calcification was seen on skin biopsy in 13 patients. Twelve patients had hyperparathyroidism. Several of the transplanted patients had been treated for graft rejection in the year preceding the diagnosis. Treatment consisted of good wound care and efforts to normalise serum calcium and phosphate levels. Five patients received an urgent parathyroidectomy. The outcome was fatal in 17 patients, with sepsis being the main cause of death. Conclusions. In our patients, calciphylaxis carried a worse prognosis than previously reported internationally. It should always be considered in the
Embase
[Article]
AN: 609136023
Although cardiac evaluation before kidney transplantation commonly focuses on coronary artery disease, a comprehensive pretransplant cardiac evaluation must consider other prognostically important cardiac conditions including functional and structural heart disease. Pulmonary hypertension (PH) is increasingly recognized among patients with kidney failure and may be driven by left heart failure, high cardiac output from arteriovenous fistula, hypoxic lung diseases, and metabolic derangements associated with renal disease. In this article, we examine several
key concepts and controversies relevant to optimizing the assessment and management of PH in kidney transplant candidates and recipients. First, categorizing PH according to underlying pathophysiolgies, hemodynamic characteristics, and treatment responses as currently defined by the World Health Organization can be challenging in this population, but should be pursued to direct appropriate management. Second, echocardiographic PH (based on variable definitions) has been reported in 13% to 50% of selected pretransplant cohorts, but use of more precise diagnostic methods is needed to better define epidemiology and underlying etiologies. Third, although measures of PH have been associated with adverse patient and graft outcomes after kidney transplantation, pilot data suggest that PH may improve with successful transplantation. Fourth, recent advances in PH treatment in the general population focus on World Health Organization group 1 pulmonary arterial hypertension, and the efficacy of management strategies for any PH type in patients with renal failure is largely unproven. Broader prospective data, including attention to the impact of transplantation, are needed to advance understanding of the frequency, causes, and optimal management of PH in kidney transplant candidates and recipients. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.

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Publisher
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Plasma exchange is a non-selective apheresis technique that can be performed by filtration or centrifugation allowing rapid purification of high molecular weight pathogens. An immunosuppressive treatment is generally associated to reduce the rebound effect of the purified substance. Substitution solutes such as human albumin and macromolecules are needed to compensate for plasma extraction. Compensation by viro-attenuated plasma is reserved solely for the treatment of thrombotic microangiopathies or when there is a risk of bleeding, because this product is very allergenic and expensive. The treatment goal for a plasma exchange session should be between one and one and one-half times the patient's plasma volume estimated at 40 mL/kg body weight. The anticoagulation is best ensured by the citrate. Complications of plasma exchange are quite rare according to the French hemapheresis registry. The level of evidence of efficacy of plasma exchange in nephrology varies from one pathology to another. Main indications of plasma exchange in nephrology are Goodpasture syndrome, antineutrophil cytoplasmic antibody vasculitis when plasma creatinine is greater than 500 mumol/L, and thrombotic microangiopathies. During renal transplantation, plasma exchange may be proposed in the context of human leukocyte antigen (HLA) desensitization protocols or ABO-incompatible graft. After renal transplantation, plasma exchange is indicated as part of the treatment of acute humoral rejection or recurrent focal segmental glomerulosclerosis on the graft. Plasma exchanges are also proposed in the management of cryoglobulinemia or polyarteritis nodosa. Hemodialysis with membranes of very high permeability tends to replace plasma exchange for myeloma nephropathy. The benefit from plasma exchange has not been formally demonstrated for the treatment of severe lupus or antiphospholipid antibody syndrome. There is no indication of plasma exchange in the treatment of scleroderma or nephrogenic systemic fibrosis. More selective apheresis techniques such as immunoadsorption are currently proposed to replace plasma exchange.
141.
Active malignancy in patients with renal vein thrombosis: influence upon clinical course and survival.
Rottenstreich A., Barzilai M., Da'as N., Kleinstern G., Varon D., Kalish Y.
Embase
Clinical and Experimental Nephrology. 21 (1) (pp 49-54), 2017. Date of Publication: 01 Feb 2017.
[Article]
AN: 608268635
Background: Renal vein thrombosis (RVT) is a rare event with myriad clinical manifestations. Published experience regarding the clinical course and management of RVT in patients beyond the neonatal period is limited to case reports and small case series. Methods: A multicenter retrospective review of consecutive admitted patients with diagnosed RVT between January 2000 and May 2015 at three different university hospitals. Results: Thirty-nine patients (53.8 % men and 46.2 % women) were included. Median age was 58 years. Malignancy (n = 19, 48.7 %), nephrotic syndrome (n = 8, 20.5 %) and infection (n = 5, 12.8 %), were the most common underlying conditions. Compared to non-cancer patients, patients with active cancer tended to be significantly older (mean age 63 +/- 18 vs. 37 +/- 22 years, P = 0.001) and presented with non-acute symptoms (P = 0.01) and unrevealing physical findings (P = 0.02). Thrombosis extension
beyond the renal vein occurred in 69.2 % of cases and was more common in cancer patients (P = 0.001). Anticoagulation therapy was administered in 71.8 % of patients leading to resolution of thrombus in most cases (30/32 patients, 94 %) during follow-up evaluation. There were six recurrent thrombotic events during a mean follow-up of 35 +/- 43 months. Nine patients (28 %) died during follow-up, all of them with malignancy. Conclusion: Active cancer is the most common cause of RVT and should be excluded when RVT is diagnosed. Clinical course of RVT in cancer patients is more indolent and diagnosis requires high index of suspicion. Survival rates are governed by the presence of malignancy. Copyright © 2016, Japanese Society of Nephrology.
Since 2011, a new device is available for low flux dialysate quotidian home hemodialysis in France and Belgium. This study aims to evaluate the characteristics and dialysis prescriptions for Nx Stage System OneTM users. We retrospectively included patients trained between 2011 and 2013 in France and Belgium. We collected data concerning their clinical features, their dialysis prescriptions, their laboratory parameters until 6 months of dialysis and, reason for dropping in case of cessation. Sixty-two patients from 31 centers, aged 48 +/- 18 years old, with a sex ratio 46/16 (M/F) are included with a median Charlson comorbidity index of 1 [0-3]. Of these patients, 71% are anuric and have been on dialysis for a mean time of 136.6 +/- 125 months. Previously, most of them had been taken care of in satellite units of dialysis (45%) and 14% are incident patients. In total, A total of 60% have an arterio-venous fistula (AVF), with 18 patients using the Buttonhole system and 2 patients have a tunneled catheter. Median time for training was 26.5 days (17-45). Among the patients, 69% are dialyzed 6 days a week, during a mean time of 142.5 +/- 20 minutes with a volume of 20.9 +/- 3 liters of dialysate and without anticoagulant (63%). Predialytic levels of hemoglobin, creatinin, urea, phosphorus and beta2microglobulin remain stable. On the contrary, there is a significant improvement of albumin and bicarbonate levels. Technique survival was 75% at 1 year, and major reason for cessation was kidney transplant. It seems that this device fits for young patients, with few comorbidities and a long past in renal chronic failure. These results suggest that dialysis adequacy is acceptable despite low dialysate volumes but need confirmation with a longer follow up and a larger cohort. Copyright © 2016 Association Societe de nephrologie
Left-Sided Living Kidney Donation Leads to Transiently Reduced Adrenocortical Responsiveness.

Embase
[Article In Press]
AN: 614327844

Living kidney donation is safe and established, but can lead to long-term complications such as chronic fatigue. Since the adrenal vein is usually transected during left-sided donor nephrectomy—which is not necessary on the right—we hypothesized that venous congestion might lead to an impairment of adrenal function, offering a possible explanation. In this prospective open label, monocentric cohort study, adrenal function was compared in left- and right-sided living kidney donors. The primary endpoint was plasma cortisol response to low-dose adrenocorticotropic hormone (ACTH) stimulation. Secondary endpoints included plasma renin and ACTH concentration as well as adrenal volume in response to donor nephrectomy. A total of 30 healthy donors-20 left- and 10 right-sided donations-were included. On postoperative day 1, response to low-dose ACTH stimulation was intact, but significantly lower after left-sided donor nephrectomy. After 28 days, adrenal responsiveness to ACTH stimulation did not differ any longer. Magnetic resonance imaging volumetry showed no significant adrenal volume change over 4 weeks, neither after left- nor after right-sided nephrectomy. In conclusion, left-sided living kidney donation entails a transiently reduced adrenocortical responsiveness, which returns to baseline after 28 days. Copyright © 2017 The American Society of Transplantation and the American Society of Transplant Surgeons.

Status
ARTICLE IN PRESS

Institution
Protocol of a randomised controlled, open-label trial of ex vivo normothermic perfusion versus static cold storage in donation after circulatory death renal transplantation.

Hosgood S.A., Saeb-Parsy K., Wilson C., Callaghan C., Collett D., Nicholson M.L.

Embase
BMJ Open. 7 (1) (no pagination), 2017. Article Number: e012237. Date of Publication: 01 Jan 2017.

[Article]
AN: 614178884

Introduction Ex vivo normothermic perfusion (EVNP) is a novel technique that reconditions the kidney and restores renal function prior to transplantation. Phase I data from a series of EVNP in extended criteria donor kidneys have established the safety and feasibility of the technique in clinical practice. Methods and analysis This is a UK-based phase II multicentre randomised controlled trial to assess the efficacy of EVNP compared with the conventional static cold storage technique in donation after circulatory death (DCD) kidney transplantation. 400 patients receiving a kidney from a DCD donor (categories III and IV, controlled) will be recruited into the study. On arrival at the transplant centre, kidneys will be randomised to receive either EVNP (n=200) or
remain in static cold storage (n=200). Kidneys undergoing EVNP will be perfused with an oxygenated packed red cell solution at near body temperature for 60 min prior to transplantation. The primary outcome measure will be determined by rates of delayed graft function (DGF) defined as the need for dialysis in the first week post-transplant. Secondary outcome measures include incidences of primary non-function, the duration of DGF, functional DGF defined as <10% fall in serum creatinine for 3 consecutive days in the first week post-transplant, creatinine reduction ratio days 2 and 5, length of hospital stay, rates of biopsy-proven acute rejection, serum creatinine and estimated glomerular filtration rate at 1, 3, 6 and 12 months post-transplant and patient and allograft survival. The EVNP assessment score will be recorded and the level of fibrosis and inflammation will also be measured using tissue, blood and urine samples. Ethics and dissemination. The study has been approved by the National Health Service (NHS) Health Research Authority Research Ethics Committee. The results are expected to be published in 2020. Trial registration number ISRCTN15821205; Pre-results. Copyright © Published by the BMJ Publishing Group Limited.

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Year of Publication
2017

145.
Allelic and Epitopic Characterization of Intra-Kidney Allograft Anti-HLA Antibodies at Allograft Nephrectomy.
The reasons for the increased incidence of de novo anti-human leukocyte antibody (HLA) donor-specific antibodies (DSAs) observed after kidney allograft nephrectomy are not fully understood. One advocated mechanism suggests that at graft loss, DSAs are not detected in the serum because they are fixed on the nonfunctional transplant; removal of the kidney allows DSAs to then appear in the blood circulation. The aim of our study was to compare anti-HLA antibodies present in the serum and in the graft at the time of an allograft nephrectomy. Using solid-phase assays, anti-HLA antibodies were searched for in the sera of 17 kidney transplant patients undergoing allograft nephrectomy. No anti-HLA antibodies were detected in the graft if they were not also detected in the serum. Eleven of the 12 patients who had DSAs detected in their sera also had DSAs detected in the grafts. Epitopic analysis revealed that most anti-HLA antibodies detected in removed grafts were directed against the donor. In summary, our data show that all anti-HLA antibodies that were detected in grafts were also detected in the sera. These intragraft anti-HLA antibodies are mostly directed against the donor at an epitopic level but not always at an antigenic level. © Copyright 2016 The American Society of Transplantation and the American Society of Transplant Surgeons
A comparison of the effects of oral vs. intravenous hydration on subclinical acute kidney injury in living kidney donors: A protocol of a randomised controlled trial.

Mackinnon S., Aitken E., Ghita R., Clancy M.

Embase


Background: Optimal treatment for established renal failure is living donor kidney transplantation. However this pathway exposes healthy individuals to significant reduction in nephron mass via major surgical procedure. Laparoscopic donor nephrectomy is now the most common method for live donor transplantation, reducing both donor post-operative pain and recovery time. However this procedure exposes kidneys to additional haemodynamic stresses. It has been suggested that donor hydration - particularly the use of preoperative intravenous fluids - may counteract these stresses, reducing subclinical acute kidney injury and ultimately improving long-term renal function. This may be important in both preservation of donor renal function and recipient graft longevity. Methods/Design: A prospective single-centre single-blinded randomized controlled trial will be carried out to determine the effects of donor preoperative intravenous fluids. The primary outcome is donor subclinical acute kidney injury (defined as plasma NGAL, >153 ng/ml) on day 1 postoperatively. Secondary outcomes include intraoperative haemodynamics, recipient subclinical acute kidney injury, perioperative complications and donor sleep quality. Donors will be randomised into two groups: the intervention group will receive active pre-hydration consisting of three litres of intravenous Hartmann's solution between midnight and 8 am before morning kidney donation, while the control group will not receive this. Both groups will receive unlimited oral fluids until midnight, as is routine. Plasma NGAL will be measured at pre-specified perioperative time points, intraoperative haemodynamic data will be collected using non-invasive cardiac output monitoring and clinical notes will be used to obtain demographic and clinical data.
The researcher will be blinded to the donor fluid hydration status. Blinded statistical analysis will be performed on an intention-to-treat basis. A prospective power calculation estimates a required sample size of 86 patients. Discussion: This study will provide important data, as there is currently little evidence about the use of donor preoperative fluids in laparoscopic nephrectomy. It is hoped that the results obtained will guide future clinical practice. Trial registration: This study has been approved by the West of Scotland Research Ethics Committee 3 (reference no. 14/WS/1160, 27 January 2015) and is registered with the International Standard Randomised Controlled Trial Number Register (reference no. ISRCTN10199225, 20 April 2015). Copyright © 2017 The Author(s).

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2017

147.
Haemolytic uraemic syndrome.
Karpman D., Loos S., Tati R., Arvidsson I.

Embase
[Review]
AN: 612702150

Haemolytic uraemic syndrome (HUS) is defined by the simultaneous occurrence of nonimmune haemolytic anaemia, thrombocytopenia and acute renal failure. This leads to the pathological lesion termed thrombotic microangiopathy, which mainly affects the kidney, as well as other
organs. HUS is associated with endothelial cell injury and platelet activation, although the underlying cause may differ. Most cases of HUS are associated with gastrointestinal infection with Shiga toxin-producing enterohaemorrhagic Escherichia coli (EHEC) strains. Atypical HUS (aHUS) is associated with complement dysregulation due to mutations or autoantibodies. In this review, we will describe the causes of HUS. In addition, we will review the clinical, pathological, haematological and biochemical features, epidemiology and pathogenetic mechanisms as well as the biochemical, microbiological, immunological and genetic investigations leading to diagnosis. Understanding the underlying mechanisms of the different subtypes of HUS enables tailoring of appropriate treatment and management. To date, there is no specific treatment for EHEC-associated HUS but patients benefit from supportive care, whereas patients with aHUS are effectively treated with anti-C5 antibody to prevent recurrences, both before and after renal transplantation. Copyright © 2016 The Association for the Publication of the Journal of Internal Medicine

148.
Effect of the direct oral anticoagulants rivaroxaban and apixaban on the disposition of calcineurin inhibitors in transplant recipients.
Vanhove T., Spriet I., Annaert P., Maertens J., Van Cleemput J., Vos R., Kuypers D.
Embase
Therapeutic Drug Monitoring, 39 (1) (pp 77-82), 2017. Date of Publication: 2017.
Background: Calcineurin inhibitors (CNIs) and direct oral anticoagulants (DOACs) share certain metabolic pathways, but whether DOACs influence CNI exposure has not been assessed.

Methods: A single-center retrospective analysis was performed including 39 organ recipients treated with the combination of a CNI and rivaroxaban (n = 29) or apixaban (n = 10). Dose-corrected CNI trough concentrations (C0/D) during 200 days before and after DOAC initiation were recorded (n = 261), together with covariates known to influence CNI disposition such as steroid dose and hematocrit. The average C0/D before and during DOAC therapy was compared using paired samples t test. Multivariable mixed models were constructed to estimate the effect of DOAC and other predictors on C0/D at each time point. Results: Group average C0/D was not significantly different before and during DOAC therapy for any CNI-DOAC combination (P = 0.089-0.761), although C0/D changed >20% in 19/39 patients (13 increases, 6 decreases). In multivariable analysis, independent predictors of tacrolimus C0/D were methylprednisolone dose (P = 0.039) and concomitant use of a CYP3A inhibitor (P = 0.007). The subgroup analysis per DOAC showed a limited but significant effect of rivaroxaban on tacrolimus C0/D (9.2% increase, P = 0.042). Independent predictors of ciclosporin C0/D were age (P = 0.018) and use of any DOAC (12.1% increase, P = 0.020). Conclusions: Apixaban, and particularly rivaroxaban, may cause a limited (<20%) increase in CNI trough concentration, an effect that is unlikely to trigger a dose change. It may be prudent to perform an additional CNI trough concentration measurement 5-7 days after DOAC initiation, but preemptive CNI dose changes are not warranted based on these observations.

Conclusions: Apixaban, and particularly rivaroxaban, may cause a limited (<20%) increase in CNI trough concentration, an effect that is unlikely to trigger a dose change. It may be prudent to perform an additional CNI trough concentration measurement 5-7 days after DOAC initiation, but preemptive CNI dose changes are not warranted based on these observations. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.

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(Spriet) Department of Pharmaceutical and Pharmacological Sciences, Clinical Pharmacology and Pharmacotherapy, Leuven, Belgium
149.
Effects of Aspirin Therapy on Ultrasound-Guided Renal Allograft Biopsy Bleeding Complications.
Baffour F.I., Hickson L.J., Stegall M.D., Dean P.G., Gunderson T.M., Atwell T.D., Kurup A.N.,
Schmitz J.J., Park W.D., Schmit G.D.
Embase
Journal of Vascular and Interventional Radiology. 28 (2) (pp 188-194), 2017. Date of Publication:
01 Feb 2017.
[Article]
AN: 613968996
Purpose To determine if patient aspirin exposure and timing affect bleeding risk after renal
allograft biopsy. Materials and Methods Review of 6,700 renal allograft biopsies (in 2,362 unique
patients) was performed. Median patient age was 53.0 years [interquartile range 43.0, 62.0];
56.2% of patients were male. Of biopsies, 4,706 (70.2%) were performed in patients with no
aspirin exposure within 10 days of biopsy; 664 (9.9%), were performed within 8-10 days of aspirin
exposure; 855 (12.8%), within 4-7 days; and 475 (7.1%), within 0-3 days. Follow-up to 3 months
after the procedure was completed in all patients. Biopsies were categorized as protocol or
indication; 19.7% were indication biopsies. Bleeding complications were graded based on SIR
criteria. Logistic regression models examined the association between aspirin use and bleeding
events. Results Rate [95% confidence interval] of major bleeding complications was 0.24% [0.14,
0.39], and rate of any bleeding complication was 0.66% [0.46, 0.90]. Bleeding events were
significantly associated with patients undergoing indication biopsies compared with protocol
biopsies (odds ratio [OR] 2.27, P = .012). Patient factors associated with major bleeding complications in multivariate models included estimated glomerular filtration rate (OR 0.61, P = .016) and platelet count (OR 0.64, P = .033). Aspirin use was not significantly associated with increased risk of bleeding complication except for use of 325 mg of aspirin within 3 days of biopsy (any complication OR 3.87 [1.12, 13.4], P = .032; major complication OR 6.30 [1.27, 31.3], P = .024). Conclusions Renal allograft biopsy bleeding complications are very rare, particularly for protocol biopsies. Use of 325 mg of aspirin within 3 days of renal allograft biopsy was associated with increased bleeding complications. Copyright © 2016 SIR
The role of nutritional assessment and early enteral nutrition for combined pancreas and kidney transplant candidates.
Finlay S., Asderakis A., Ilham A., Elker D., Chapman D., Ablorsu E.

Embase
[Article]
AN: 614079307

Background Early post-operative enteral nutrition is an important part of perioperative management and is strongly supported by ESPEN Guidelines. However, there is limited evidence into the use of Early Enteral Nutrition (EEN) after combined Pancreas and Kidney Transplantation (PKT). We know malnutrition in type-1 diabetics with end stage renal failure (ESRF) is a common problem and a significant risk factor. Therefore, we introduced EEN in our patients. Method We monitored and recorded nutritional data on 29 PKT recipients who underwent transplantation between Oct 2007 and Jan 2010 without a nutritional assessment or EEN [Monitored Group (MG)] and on 30 PKT recipients between Feb 2010 and Dec 2013 who received a nutritional assessment and EEN (Naso-jejunal feed or oral intake with supplementation, according to their nutritional status) [Fed Group (FG)]. The end-point was to assess patients’ daily post-transplant nutritional intake. This was calculated as a percentage of estimated nutritional requirements using the Schofield equation with a 25% added stress factor and relevant activity factor. Following a literature search and realistic targets our aim was to reach >60% requirements: achievement of >=60% energy requirements by day-7 (7d-60%) and at the time of discharge (total-60%) [13,14].

Results There was no significant difference between MG and FG patients in cold ischemic time (CIT), recipient-age and donor-age, Length of Stay and donor-creatinine. In contrast, FG patients were less frequently in predialysis status 41.4% vs. 26.7%, p = 0.001; and had higher incidence of BMI <22.5 kg/m2 63.3% vs. 48.3%, p = <0.005. In outcomes, FG patients more frequently achieved a higher average % of nutritional requirements in the first week 39.69% vs. 22.37%, p = <0.005; as well as during whole in-patient stay 57.24% vs. 44.43%, p = <0.005 (Table 3, Figs. 1 and 2). The FG spent a greater proportion during the first week 66.7% vs. 31%, p = <0.005; and of whole their admission 93.3% vs. 75.9%, p = <0.005; meeting more than 60% of nutritional requirements. Most important, the need for parenteral nutrition within the FG was significantly lower, 7.1% vs. 20.7%, p < 0.005 (Table 3). Conclusion Our results show that these patients benefit from planned EEN and receive better nutritional support when compared to the patients managed with the historic, reactive approach to nutritional care. Nutritional intake in the first week as well as during the whole admission was superior in patients receiving active EEN despite a more difficult post-operative course due to higher incidence of re-operations compared to the control group. Also the need for parenteral nutrition was significantly lower in this group. In
addition, pre-transplant nutritional assessment is beneficial and accurately highlights those who may be at risk of malnutrition pre and post-operatively. Copyright © 2016

151.
Abstracts of papers 2017 Annual Meeting American Society for Clinical Pharmacology and Therapeutics.
Anonymous
Embase
[Conference Review]
AN: 614166297
The proceedings contain 356 papers. The topics discussed include: comparison of non-compartmental analysis (NCA) estimation and population pharmacokinetic (PPK) predictions of exposure changes as a function of renal impairment; clinical implementation of warfarin pharmacogenetics in a real-world setting: a proposal for a new pharmacogenetic dosing approach for diverse patient populations; data-driven learning analysis identifies gender differences in metabolic treatment response of citalopram/escitalopram in major depressive disorder; results of the implementation of pharmacogenomics into primary care project; a genetic variant of ABCG2 confers risk for poor response to allopurinol independent of its effect on gout severity; and
tacrolimus population pharmacokinetics and cyp3a5 genotypes in African American and
Caucasian renal transplant recipients.

Status
CONFEERENCE ABSTRACT
Publisher
Nature Publishing Group
Date Created
20170125
Year of Publication
2017

152.
Effects of Reduced Kidney Function because of Living Kidney Donation on Left Ventricular Mass.
Altmann U., Boger C.A., Farkas S., Mack M., Luchner A., Hamer O.W., Zeman F., Debl K.,
Fellner C., Jungbauer C., Banas B., Buchner S.
Embase
Hypertension. 69 (2) (pp 297-303), 2017. Date of Publication: 01 Feb 2017.
[Article]
AN: 613994782
Living kidney donation is associated with a small but significant increase in cardiovascular
mortality. In addition, mildly decreased kidney function is associated with an increase of left
ventricular mass and with cardiovascular disease in patients with chronic kidney disease. To
investigate this association, we evaluated the impact of mildly decreased kidney function after
living kidney donation on subclinical cardiac structural and functional changes. In this prospective
cohort study, cardiac and renal magnetic resonance imaging and laboratory analyses were
performed in 23 living kidney donors (mean age 54+/-10 years, 52% male) before donation and at
4 and 12 months after nephrectomy. Mean estimated glomerular filtration rate was 102+/-15 mL
min-1 1.73 m-2 before donation and 70+/-13 mL min-1 1.73 m-2 at 12 months (P<0.001). Left
ventricular mass increased from 112+/-22 to 115+/-23 g (P<0.001). In addition, heart rate was
significantly increased (65+/-7 to 74+/-14; P=0.04). Concurrently, kidney and adrenal gland
volume increased from 163+/-33 to 195+/-34 mL (P<0.001) and from 7.6+/-2.2 to 8.4+/-2.4 mL
(P=0.032), respectively, as did procollagen type III (DELTA0.11 ng/mL, P<0.001) and not N-
Terminal probrain natriuretic peptide (DELTA14 pg/mL, P=0.25). The mild decrease in kidney
function after living kidney donation leads to a significant but clinically negligible increase in left ventricular mass 12 months after living kidney donation. This study of a longitudinal analysis of living kidney donors provides direct evidence of a kidney-heart link. Copyright © 2017 American Heart Association, Inc.

Ensuring Evidence-Based Practice: A Study of Factors Associated with Nonuse of American Urological Association Guidelines.
Reinstatler L., Schroeck F.R., Hyams E.S.
Embase
[Article]
AN: 613903157

Introduction Evidence-based guidelines are published by the AUA (American Urological Association) to improve the quality and consistency of urological care. The 2014 AUA Census reported a unique field regarding provider utilization of AUA Guidelines. We sought to identify factors associated with nonuse of AUA Guidelines to understand how education and dissemination of these guidelines might be improved. Methods Using 2014 AUA Census data
providers were stratified based on self-reported use or nonuse of AUA Guidelines. Bivariate analyses and multivariable logistic regression analysis were performed to identify factors associated with nonuse. Post-stratification weights were applied to calculate national estimates with SAS, version 9.4. Results The 2,202 survey respondents represented 11,680 practicing urologists. AUA guideline use was reported by 95.0% of the weighted population. There was no significant difference in utilization based on gender, race, country of origin, practice type or fellowship completion. After controlling for other variables urologists who reported practicing in a rural area were more likely to be nonusers (OR 1.06, 95% CI 1.03-1.09). Additionally, urologists who had been practicing longer were less likely to utilize guidelines compared with those earlier in the career (practicing 10 to 20 years OR 1.15, 95% CI 1.10-1.21 and more than 20 years OR 1.13, 95% CI 1.09-1.18, p <0.05). Conclusions Despite continued publication and dissemination of AUA Guidelines about 5% of urologists do not utilize guidelines. Later career status and rural geography were associated with nonuse. These data may inform efforts to improve dissemination and education regarding evidence-based practice. Copyright © 2017 American Urological Association Education and Research, Inc.

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Elsevier Inc. (E-mail: usjcs@elsevier.com)
Date Created
20170120
Year of Publication
2017

Direct oral anticoagulant considerations in solid organ transplantation: A review.
For more than 60 years, warfarin was the only oral anticoagulation agent available for use in the United States. In many recent clinical trials, several direct oral anticoagulants (DOACs) demonstrated similar efficacy with an equal or superior safety profile, with some other notable benefits. The DOACs have lower inter- and intrapatient variability, much shorter half-lives, and less known drug-drug and drug-food interactions as compared to warfarin. Despite these demonstrated benefits, the use of DOACs has not gained uniform acceptance because of lack of supportive data in special patient populations, including recipients of solid organ transplants maintained on immunosuppression. This review describes the properties of several novel DOACs including their pharmacology and mechanisms of action as they relate to use among solid organ transplant recipients. We have particularly focused on (i) dosing in patients with impaired renal and hepatic function; (ii) considerations for drug-drug interactions with immunosuppressive medications; and (iii) management of the anticoagulated patients at the time of unplanned surgery. The risks and benefits of the use of DOACs in solid organ transplant recipients should be carefully evaluated prior to the introduction of these agents in this highly distinct patient population.
Longitudinal assessment of cardiac morphology and function following kidney transplantation. 
Embase 
Clinical Transplantation. 31 (1) (no pagination), 2017. Article Number: e12864. Date of 
Publication: 01 Jan 2017. 
[Article]
AN: 613965450
Background: Abnormal cardiac morphology is a risk factor for cardiovascular complications in 
kidney transplant patients. A supraphysiologic level of fibroblast growth factor 23 (FGF-23) has 
been associated with myocardial hypertrophy in this patient population. Our aim was to evaluate 
the change in cardiac morphology and function following kidney transplantation and to evaluate 
the association between the change in FGF-23 concentrations and cardiac morphology. Methods: 
We performed a longitudinal, prospective cohort study of 143 kidney transplant recipients (73% 
male, 75% white) measuring left ventricular (LV) mass index, left atrial (LA) volume index, and 
ejection fraction (EF) by echocardiography at months 1, 12, and 24 post-transplant. FGF-23 
levels were measured at months 1 and 24 post-transplant. Results: Unadjusted and adjusted 
linear mixed-effects models were used to examine changes in outcomes over time. In the 
adjusted model, LV mass index (P<.001) and LA volume index (P<.001) decreased and EF 
(P=.009) increased significantly over time. There was a significant association between 
decreasing FGF-23 levels and improving LV mass index following transplant (P=.036) in the 
unadjusted model; however, there was no significant relationship in the adjusted model (0.195). 
Conclusion: Understanding the progression of unique cardiovascular risk factors associated with 
kidney transplantation may provide potential opportunities to improve survival. Copyright © 2016 
John Wiley & Sons A/S. Published by John Wiley & Sons Ltd

Status
EMBASE

Institution
(Kensinger) Department of Surgery, Vanderbilt University Medical Center, Nashville, TN, United 
States  (Hernandez) Department of Clinical Anesthesiology, Division of Critical Care Medicine
Kidney injury is a common clinical feature among liver transplantation (LT) candidates that heavily affects prognosis and complicates the surgical decision-making process. Up to 20% of patients undergoing LT demonstrate some degree of renal impairment, and 2% will benefit from a combined liver-kidney transplantation (LKT). We present a case-control study of all patients who underwent LKT and combined liver-dual kidney transplantation (LDKT) from November 2013 to March 2016. For the selection of LDKT candidates, a histological-based algorithm was applied: when evaluating extended criteria donors (ECDs), with any Remuzzi score between 4 and 7, we would consider performing a LDKT instead of a simple LKT. Study groups were similar for recipient variables. In the LDKT group, donor age, donor risk index, and donor body mass index were found to be significantly higher. Biopsies obtained from all pairs of kidney grafts in the LDKT...
group demonstrated the following Remuzzi scores: 4+4, 4+4, 7+1, 4+5. Despite longer operative times for the LDKT procedure, no differences were observed regarding the main investigated outcome parameters. Overall survival was 100% (LDKT) and 91% (LKT, \( P > 0.99 \)). This is a preliminary experience which might indicate that LDKT is a safe, feasible, and resource-effective technique. The evaluation of a larger cohort, as well as the experience from other centers, would be needed to clearly identify its role in the ECD era. Liver Transplantation 23:28-34 2017 AASLD. Copyright © 2016 by the American Association for the Study of Liver Diseases

Status
EMBASE

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(Di Laudo, Ravaioli, Cescon, Del Gaudio, Zanfi, Cucchetti, Ercolani, Pinna) Department of General Surgery and Transplantation, University of Bologna, S. Orsola-Malpighi University Hospital, Bologna, Italy  (La Manna, Comai) Department of Nephrology, University of Bologna, S. Orsola-Malpighi University Hospital, Bologna, Italy

Publisher
John Wiley and Sons Ltd (Southern Gate, Chichester, West Sussex PO19 8SQ, United Kingdom)

Date Created
20170110

Year of Publication
2017

157.
Retrospective Analysis of Ultrasound-Detected Bleeding Complications after Ultrasound-Guided Transcutaneous Kidney Biopsies.

Preuss S., Kuechle C., Wagenpfeil S., Schmaderer C., Renders L., Heemann U., Stock K.

Embase
Ultrasound in Medicine and Biology. 43 (1) (pp 153-162), 2017. Date of Publication: 01 Jan 2017.

[Article]
AN: 613568518

The aim of this retrospective single-center study was to examine ultrasound-detected complications after diagnostic parenchymal renal biopsies. After 471 ultrasound-guided kidney biopsies (225 native kidneys and 246 renal allografts), ultrasound revealed hematomas (21.9%), arterio-venous fistulas (8.9%), active bleeding (1.1%) and hematuria (0.4%). Only 0.8% of all
patients required invasive intervention such as coiling (n = 3) and surgical procedures (n = 1). Three episodes of bleeding (0.6%) were solved with manual compression. One patient (0.2%) needed an irrigation catheter because of hematuria. Furthermore, six patients (1.3%) received blood transfusion. Ultrasound-guided biopsies are safe. With modern ultrasound machines using multi-frequency transducers with high resolution and harmonic imaging, even marginal bleeding after renal biopsy is detected. Copyright © 2016 World Federation for Ultrasound in Medicine & Biology

158.
Vitamin K antagonists for stroke prevention in hemodialysis patients with atrial fibrillation: A systematic review and meta-analysis.
Van Der Meersch H., De Bacquer D., De Vriese A.S.
Embase
[Article]
AN: 613243004
Background The use of vitamin K antagonists (VKAs) in hemodialysis patients with atrial fibrillation (AF) is controversial. No randomized trials are available and observational studies have yielded conflicting results, engendering a large clinical practice variability and physician uncertainty. An unresolved but highly relevant question is whether AF poses a true risk of
ischemic stroke in hemodialysis and whether any form of oral anticoagulation is therefore warranted. Methods We conducted a systematic review of studies that compared the incidence of ischemic stroke and bleeding in hemodialysis patients with AF taking VKA and those not taking VKA. When hemodialysis patients had been pooled with peritoneal dialysis, kidney transplant, or stage V chronic kidney disease patients, unpublished outcome data of the hemodialysis subgroup were obtained through personal communication. The main outcome measures were ischemic stroke/thromboembolic events, all-cause mortality, major bleeding, and hemorrhagic stroke. Combined hazard ratios (HRs) and 95% CIs were calculated using a random-effects model. Results Twelve prospective or retrospective cohort studies were included in the meta-analysis, totaling 17,380 hemodialysis patients of whom 4,010 (23.1%) received VKA. In VKA-treated patients, mean CHADS2 or CHA2DS2VASc score was low (range 1.7-2.75) or a sizeable proportion of patients had scores <2 (range 2%-23%). Time in the therapeutic range or mean international normalized ratio was generally low. Treatment with VKA was associated with a nonsignificant 26% reduction of the risk of ischemic stroke (HR 0.74; 0.51-1.06), a 21% increase in total bleeding risk (HR 1.21; 1.03-1.43), and no effect on mortality (HR 1.00; 0.92-1.09). Vitamin K antagonist almost doubled the risk of hemorrhagic stroke, but this did not reach the limit of statistical significance (4 studies, n = 16,365; HR 1.93; 0.93-3.98). Conclusion Our meta-analysis revealed a trend for a reduction of the risk of ischemic stroke in hemodialysis patients with AF treated with VKA. The true protective effect may have been underestimated, owing to inclusion of low-risk patients not expected to benefit from anticoagulation and to suboptimal anticoagulation. However, assessment of the overall effect of VKA in hemodialysis patients should also take into account the increased risk of bleeding, in particular of hemorrhagic stroke. Whether new oral anticoagulants provide a better benefit-risk ratio in hemodialysis patients should be the subject of future trials. Copyright © 2016 Elsevier Inc.

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The proceedings contain 613 papers. The topics discussed include: influence of donor warm ischemia time on development of acute kidney injury after DCD liver transplantation; serum autoantibodies are associated with chronic hepatitis and graft fibrosis after pediatric liver transplantation; farnesoid-x-receptor aggravate liver ischemia reperfusion injury by transcriptional suppress autophagy; post-transplant regulatory T cells mobilization via IP10/CXCR3 signaling promote liver tumor recurrence after transplantation; assessment of cardiovascular disease risk in liver transplant recipients with everolimus-based calcineurin inhibitor reduction or withdrawal regimen: a 3-year post-hoc analysis from the randomized H2304 extension study; long-term outcome in liver transplantation candidates with portopulmonary hypertension; pretransplant malnutrition reduces survival after liver transplantation; acute kidney injury in donation after circulatory death liver transplantation: UK single centre study; liver transplantation in patients actively drinking less than 6 months before transplant presenting with acute decompensation: a single center experience; and visceral adiposity is associated with increased recurrence of hepatocellular carcinoma following liver transplantation.

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The proceedings contain 613 papers. The topics discussed include: influence of donor warm ischemia time on development of acute kidney injury after DCD liver transplantation; serum autoantibodies are associated with chronic hepatitis and graft fibrosis after pediatric liver transplantation; farnesoid-x-receptor aggravate liver ischemia reperfusion injury by transcriptional suppress autophagy; post-transplant regulatory T cells mobilization via IP10/CXCR3 signaling promote liver tumor recurrence after transplantation; assessment of cardiovascular disease risk in liver transplant recipients with everolimus-based calcineurin inhibitor reduction or withdrawal regimen: a 3-year post-hoc analysis from the randomized H2304 extension study; long-term outcome in liver transplantation candidates with portopulmonary hypertension; pretransplant malnutrition reduces survival after liver transplantation; acute kidney injury in donation after circulatory death liver transplantation: UK single centre study; liver transplantation in patients actively drinking less than 6 months before transplant presenting with acute decompensation: a single center experience; and visceral adiposity is associated with increased recurrence of hepatocellular carcinoma following liver transplantation.
Publisher
Lippincott Williams and Wilkins

161.
Risk factors of acute kidney injury after orthotopic liver transplantation in China
Yin Z, Li B, Zou F, Li H, Wang X
EBM Reviews - Cochrane Central Register of Controlled Trials
[Journal: Article In Press]
AN: CN-01244844
In this study, we determined the risk factors for acute kidney injury (AKI) following orthotopic liver transplantation (OLT) in China. We collected 5074 donation after cardiac death (DCD) OLT recipients who underwent surgery between January 1, 2010, and December 31, 2015, in 169 academic hospitals or transplant centers in China. Univariate and multivariate analyses were
used to investigate the criticality of donor, graft, or recipient variables in the development of post-OLT AKI. In all, 4482 patients were included (median age, 49.31 years). Post-OLT AKI occurred in 3.97% patients, and 73.6% of all OLT patients were male. The 1- and 5-year cumulative survival rates (CSRs) of the AKI group were 33.95% and 25.24%, respectively, compared with 86.34% and 70.05%, respectively, of the non-AKI group (P < .001). The independent risk factors for post-OLT AKI were blood loss, cold ischemia time, warm ischemia time, preoperative serum creatinine, the treatment period with dopamine, overexposure to calcineurin inhibitor, and combined mycophenolate mofetil use (P < .05). These had a high prediction accuracy for post-OLT AKI (area under the curve [AUC] =0.740). Copyright (C) 2016.

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Publisher
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The safety using intraoperative ureteric double J stent for prevention of urological complications in kidney transplant recipients
Choi NK
EBM Reviews - Cochrane Central Register of Controlled Trials
[Journal: Conference Abstract]
AN: CN-01252547
Objective: To evaluate the impact of the use of the double J stent in in kidney transplant recipients with or without ureteric double J stent. To examine the benefits and harms of routine ureteric double J stenting to prevent urological complications in kidney transplant recipients.
Materials and Methods: Between March 2011 and February 2012, 80 adult recipients underwent renal transplant at a single center and one surgeon. A retrospective study was conducted on two groups of patients: Group A undergo Double-J stent and group B no-stent ureterovesical anastomosis. We reviewed the urological complications: fistula, ureteral obstruction, urinary leakage and urinary tract infection. The patients were scheduled for stent removal after 2 weeks.
Results: A total of 80 patients were randomized to a stent (20) and a no-stent (60) group. Group A: No ureteral obstruction and urinary leakage were developed in this group. 3 patients (20%) had a positive urinary culture. Group B: Two patients (13%) developed ureteral obstruction and another four (26.7%) developed urinary leakage. Four patients (26.7%) had a positive urinary culture. Conclusion: The routine insertion of a double J stent in kidney transplants reduces the number of early complications urinary fistula and ureteral obstructions. Using a ureteral stent at renal transplantation significantly decreases the early urinary complications of urine leakage and obstruction. However, stent removal within 4 weeks of insertion appears advisable.

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Publisher
Lippincott Williams and Wilkins

163.
Robotic-assisted versus laparoscopic hand-assisted live donor nephrectomy
EBM Reviews - Cochrane Central Register of Controlled Trials
[Journal: Conference Abstract]
AN: CN-01252551
Background: Live donor nephrectomy allows preemptive and timely renal transplantation with optimal clinical outcomes for patients with end stage renal failure (ESRF). Currently living donor transplantation accounts for over a third of all renal transplantations in the US and UK. In view of a growing living donor pool, and its maximal benefit for patients with ESRF, surgical technique must be optimized to protect donor safety and welfare. Herein, we compare two minimally invasive surgical approaches, robotic-assisted versus laparoscopic hand-assisted, for live donor nephrectomy (LDN). Methods: A retrospective study comparing robotic-assisted (n=25) versus laparoscopic hand-assisted (n=36) approaches utilized in 2 different centres for LDN over a 2-year period in 2014-2015. Results: All LDNs, robotic or laparoscopic, were completed without conversion to open donor nephrectomy. Patient demographics were comparable in both groups in
age (robotic: 53yrs+/-10 vs laparoscopic: 53yrs+/-12; p=ns), BMI (25kg/m2+/-5 vs 25kg/m2+/-4; p=ns) whilst female donors dominated (64%F vs 50%F; p=ns). Left sided nephrectomy was favoured in the robotic group (23L:2R, 92%L vs 18L:18R, 50%L, p=0.01). Operative time of robotic surgery was longer with additional docking time than laparoscopic surgery (309mins+/-50, range 244-435 vs 135mins+/-23, range 94-187; p<0.01) nevertheless the warm ischaemic time was comparable in both groups (214secs+/-66 vs 218secs+/-74; p=ns). There were no perioperative complications necessitating reoperation. Length of hospital stay tended to be shorter in the robotic group (median 4days, range 2-13 vs 6days, range 3-8; p=0.09) with majority of patients discharged within 4 days (15/25, 60% vs 10/36, 27%; p=0.02) compared to a smaller portion of patients in the laparoscopic group. Reduction of donor renal function was measured as a ratio of creatinine at discharge vs. preoperative, which was higher in the robotic group (1.58+/-0.32 vs 1.40+/-0.22; p=0.01); probably due to earlier discharges. Notably, there was no difference in actual donor creatinine at discharge (robotic: 114mumol/l+/-21 vs laparoscopic: 111mumol/l+/-24; p=ns). The recipient creatinine at discharge was acceptable at 132mumol/l+/-34 (range 89-227) in the robotic group. Postoperative complications developed in 2 patients in each group; 2 Clavien II (chest infection, wound infection) in the robotic and 2 Clavien III (abdominal wall abscess, incisional hernia) in the laparoscopic groups. Conclusion: Robotic-assisted live donor nephrectomy was safe and feasible. Operative time was longer in robotic surgery nevertheless the warm ischaemic time was comparable to the laparoscopic approach; ultimately, the length of hospital stay tended to be shorter. Of note, there was no difference in donor renal function at discharge. In view of a growing living donor pool and its maximal benefit for patients with ESRF, minimally invasive surgery in form of robotic-assisted live donor nephrectomy may be an avenue for optimal recovery. (Figure Presented).

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Publisher
Lippincott Williams and Wilkins

164.
Efficacy of using FloSeal to prevent post renal transplantation lymphocele formation
Lam YC, Chan CK, Ng CM, Chiu Y, Ho KL, Chu TY, Cheung FK
EBM Reviews - Cochrane Central Register of Controlled Trials
Introduction: Preliminary data suggests the use of FloSeal hemostatic matrix can reduce lymphocele formation after pelvic lymphadenopathy for prostate cancer. We investigate the efficacy of using FloSeal to reduce the incidence of post renal transplantation lymphocele.

Materials and Methods: We retrospectively reviewed the data of renal transplantation performed from June 2002 to January 2016 in our center. From May 2013 onwards, FloSeal was applied over graft kidney hilum and segment of iliac artery dissection. Patients' demographics and perioperative parameters were analysed. Symptomatic lymphocele was defined as those causing either mass effect, impaired renal function or infection requiring intervention. Chi-square and t-test were used for statistical analysis of categorical and continuous variables respectively.

Results: Total 238 patients (203 cadaveric and 35 living-related renal transplantation) were included in this 15 years review. The mean age was 36.6 years old (range 4-69 years old) and FloSeal was applied in 62 (26.1%) patients. There was no significant difference in patients' demographics such as age, gender and duration of renal replacement therapy between the FloSeal and non-FloSeal groups. The incidence of lymphocele formation was significantly reduced in FloSeal group (9.7% vs 22.2%, p=0.031). Also, the incidence of symptomatic lymphocele formation was lower in FloSeal group as well (4.8% vs 14.2%, p=0.049). Total drain output was significant less in FloSeal group (464ml vs 890ml, p=0.004) and drains could be removed earlier (4.3 days vs 6.2 days, p=0.000). No adverse effect associated with the usage of FloSeal occurred.

Discussion: FloSeal is a hemostatic matrix using in both open and laparoscopic procedures. It consists of bovine-derived gelatin matrix mixed with human-derived thrombin before usage. The effectiveness of FloSeal in lymphocele prevention may come from several hypotheses. Firstly, the swelling of gelatin granules by up to 20% after local application may offer a local tamponade effect resulting in occlusion of leaky lymphatic channel. Moreover, as lymph contains a limited amount of fibrinogen, it may form a fibrin clot with the thrombin solution leading to further blockage of the disrupted lymphatic chain. Lastly, the cross-linked gelatin granules facilitates conformation to irregular wound geometries. Thereby it maintains contiguous contact of tissue with the active site of lymphorrhea so that leakage site of lymphatic channel is minimized and tissue healing is promoted. The promising result of FloSeal in preventing post renal transplantation lymphocele formation is strongly back up these hypotheses.

Conclusion: The results of this study suggest FloSeal can reduce lymphocele formation after renal transplantation and associated intervention. It also helps decrease drain output and earlier drain removal. This
findings warrant a randomized controlled study to further confirm the use of FloSeal in such aspect.

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Publisher
Lippincott Williams and Wilkins

Predictors of survival in renal transplantation for lupus nephritis-40 patients in 40 years
Ntatsaki E, Garcia AV, Del Carmelo Gracia Tello B, Salama AD, Isenberg DA

[Journal: Conference Abstract]
AN: CN-01292748 NEW

Background/Purpose: Lupus nephritis (LN) is an important cause of morbidity and mortality in patients with systemic lupus erythematosus (SLE), leading to end stage renal failure (ESRF) in up to a quarter of the patients and often necessitating transplantation. Predicting adverse clinical outcomes in such patients remains challenging. We aimed to identify predictors of survival in our cohort of SLE patients undergoing renal transplantation (rTp). Methods: This was a retrospective analysis of all SLE patients under long term follow up who developed renal failure in the 40 year period (1975-2015) in two tertiary centres. Hospital notes, electronic records and correspondence from Family Physicians and colleagues in other hospitals were reviewed. Cox proportional hazard regression and receiver operator curves (ROC) were used to determine potential predictors.

Amongst the factors considered were duration of SLE diagnosis, ethnicity, gender, age at onset of SLE and LN, serology (including dsDNA binding and antiphospholipid antibodies and complement levels), comorbidities (including diabetes, hypertension, dyslipidaemia and cardiovascular disease), class of LN on biopsy, decade of rTp, drugs and adherence to treatment. Results: Over the last 40 years, from a total of 361 patients with LN, 40 patients (age 35+-11 years, 34 female (85%), of which 15 Caucasian (38%), 15 Afro Caribbean (38%), and 10 Asian (25%)) underwent rTp. During a median follow up of 85 months (IQR 63,127) 6 patients died (15% mortality) and the five year survival was 95% (table 1). Univariate analysis only identified
time on dialysis prior to rTp as a predictor of survival with a Hazard Ratio of 1.017 for each additional month spent on dialysis (95%CI= 1.000- 1.034, p=0.044). ROC curves were used to calculate the optimal maximum time on dialysis prior to conferring an adverse outcome showing that >23 months on dialysis had an adverse effect with sensitivity of 0.800 and specificity 0.430 of death (figure1). Conclusion: To predict adverse outcomes in rTp remains challenging. The only potential modifiable risk identified is time spent on dialysis prior to rTp with patients spending <23 months on dialysis having a beneficial outcome. (Table Presented).

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Publisher
John Wiley and Sons Inc.

166.
Robotic-assisted versus laparoscopic hand-assisted live donor nephrectomy
Renard J, Iselin C
EBM Reviews - Cochrane Central Register of Controlled Trials
[Journal: Conference Abstract]
AN: CN-01293477  NEW

Introduction & Objective: Living donor nephrectomy allows preemptive and timely renal transplantation with optimal clinical outcomes for patients with end stage renal failure (ESRF). In view of a growing living donor pool, and its maximal benefit for patients with ESRF, surgical technique must be optimized to protect donor safety and welfare. Herein, we compare two minimally invasive surgical approaches, robotic-assisted versus laparoscopic hand-assisted, for live donor nephrectomy (LDN). Materials and Methods: A retrospective study comparing robotic-assisted (n = 25) versus laparoscopic hand-assisted (n = 36) approaches utilized in 2 different centres for LDN in 2014-2015. Results: All LDNs, robotic or laparoscopic, were completed without conversion to open donor nephrectomy. Patient demographics were comparable in both groups. Left sided nephrectomy was favoured in the robotic group (23L:2R vs 18L:18R). Operative time of robotic surgery was longer with additional docking time than laparoscopic surgery (309 mins -50, range 244-435 vs 135 mins +/-23, range 94-187; p = ns). There were no perioperative complications necessitating reoperation. Hospital stay tended to be shorter in the robotic group.
(median 4 days, range 2-13 vs 6 days, range 3-8; p = 0.09) with majority of patients discharged within 4 days (15/25, 60% vs 10/36, 27%; p = 0.02) compared to a smaller portion of patients in the laparoscopic group. Reduction of donor renal function was measured as a ratio of creatinine at discharge vs. preoperative, which was higher in the robotic group (1.58 +/- 0.32 vs 1.40 +/- 0.22; p = 0.01); probably due to earlier discharges. There was no difference in actual donor creatinine at discharge (robotic: 114mumol/l +/- 21 vs laparoscopic: 111mumol/l +/- 24; p = ns).

Recipient creatinine at discharge was 132mumol/l +/- 34 (range 89-227) in the robotic group. Postoperative complications developed in 2 patients in each group; 2 Clavien II in the robotic and 2 Clavien III in the laparoscopic groups. Conclusions: In view of a growing living donor pool and its maximal benefit for patients with ESRF, robotic-assisted live donor nephrectomy may be an avenue for optimal recovery.

Publisher
Mary Ann Liebert Inc.
drawn over each kidney, encompassing the cortex and medulla but excluding the collecting system and any coexisting cysts. Parametric Ktrans values were automatically generated.

Results In the pre-transplantation group, mean Ktrans values for the right and left kidneys were 0.55+/−0.09min-1 and 0.44+/−0.15min-1, respectively. In the post-transplantation group, mean Ktrans values of the right and left kidneys were 0.27+/−0.07min-1 and 0.25+/−0.10min-1, respectively. There were statistically significant differences between right and left kidneys in terms of mean Ktrans values in the pre- and post-transplantation groups (P<0.001). Conclusion Our preliminary results show that native kidneys were still functioning 6 months after transplantation. MR perfusion using Ktrans may constitute a non-invasive means of determination of the viability of native kidneys after renal transplantation.

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[Journal Article]
UI: 27901336

INTRODUCTION: For the treatment of patients with end-stage renal disease, kidney transplantation is preferred to renal replacement modalities such as hemodialysis and peritoneal dialysis. Although open surgery remains the gold standard, minimally invasive approaches have recently been applied in transplant kidney surgery. Despite growing enthusiasm and potential benefits of robotic kidney transplant, many aspects of this novel technique remain controversial. Aim of this study was to analyze the current status and future developments in robotic-assisted surgery for kidney transplantation.

EVIDENCE ACQUISITION: A systematic PubMed search for peer-reviewed studies was performed using keywords such as "Minimally invasive surgery" or "Robotic" or "Robot assisted" AND "Kidney transplantation". Eligible articles were reviewed according to the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) criteria.

EVIDENCE SYNTHESIS: 11 studies evaluated reported the feasibility, safety, and reproducibility of robotic kidney transplantation using either a transperitoneal or an extraperitoneal approach. The graft kidney is usually introduced via a periumbilical or Gibson incision. The functional outcomes of the robotic approach are equivalent to those of open kidney transplantation in terms of mean serum creatinine at 6 month and delayed graft function. The benefits of robotic kidney transplantation include easier vascular anastomosis, better cosmetic results, and a lower complication rate, including in the obese population. Many concerns remain over the potential impairment of graft function due to pneumoperitoneum and warm ischemia and the technical difficulties related to the vascular anastomosis. Refinement of the robotic tactile feedback and development of a cold ischemia device may lead to further improvement in this novel technique.

CONCLUSIONS: Robotic surgery allows kidney transplantation to be performed under optimal operative conditions, reducing complications while maintaining the functional results achieved by the open approach. The evolution of this technique is in progress.
Investigations on renal vascularisation pathology in the Polish population. 1. Incidence of multiple kidney arteries.

Sosnik HH; Sosnik K.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

Folia Morphologica (Warszawa). , 2016 Dec 27.
[Journal Article]

UI: 28026854

BACKGROUND: The aim of the study was to determine the incidence of multiple kidney arteries in the Polish population.

MATERIAL AND METHODS: The study group comprised 924 deceased patients aged between one month and 94 years (mean age : 63.4 +/- 22.4 years) who were subject to aortonephrography and sample preparation. The ratio of male to female patients was 479:445.

RESULTS: Multiple kidney arteries were observed in 44.8% male and 31.5% female patients (p=0,004). Considering male patients right multiple kidney arteries were diagnosed in 24.4%, and left multiple kidney arteries in 31.3% of cases (p=0,017). In female patients right multiple kidney arteries were observed in 17.8% of cases, and left multiple kidney arteries in 19.6% of cases (p=0,49).

CONCLUSIONS: The incidence of multiple kidney arteries in the Polish population is a frequent phenomenon, and should be considered in case of urological surgery and kidney transplantation.
Prevention and management of lymphocele formation following kidney transplantation. [Review]
Golriz M; Klauss M; Zeier M; Mehrabi A.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Transplantation Reviews. , 2016 Nov 16.
[Review. Journal Article]
UI: 28011070
Despite preventive methods, lymphoceles frequently form following kidney transplantation (KTx), with an incidence of 0.6%-51%. Here, we summarize the current strategies for preventing and managing this complication, and describe the approach used in our department. Rapid diagnosis and early treatment of lymphoceles through a well-defined approach can prevent or reduce the risk of organ loss. Diagnosis can be made by ultrasound, computed tomography, or magnetic resonance imaging and laparoscopic fenestration is the current therapy of choice when non-surgical methods fail. Preventive methods should be performed pre-, intra-, and post-operatively. A peritoneal fenestration at the end of KTx seems to be a reasonable method for preventing lymphocele formation.
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Hosgood SA; Nicholson ML.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Transplantation. , 2016 Sep 27.
[Journal Article]
UI: 27681269
BACKGROUND: The measurement of urinary biomarkers during ex-vivo normothermic kidney perfusion (EVKP) may aid in the assessment of a kidney prior to transplantation. This study measured levels of neutrophil gelatinase-associated lipocalin (NGAL), kidney injury molecule-1 (KIM-1) and endothelin-1 (ET-1) during EVKP in a series of discarded human kidneys.
METHODS: Fifty six kidneys from deceased donors were recruited into the study. Each kidney underwent 60 minutes of EVKP and was scored based on the macroscopic appearance, renal blood flow and urine output. The scores ranged from 1 (least injury) to 5 (most severe). Levels of oxygen consumption, extraction, creatinine fall and fractional excretion of sodium were measured during perfusion. Urinary levels of NGAL, KIM-1 and ET-1 were measured after EVKP.
RESULTS: Thirty eight kidneys had an EVKP score of 1 or 2, 8 a score of 3 and 10 a score of 4 or 5. During EVKP lower levels of oxygen consumption, higher oxygen extraction, a lower decrement of serum creatinine and higher levels of NGAL and ET-1 were associated with a higher EVKP score (P<0.05). These parameters were also associated with a raised creatinine
level in the donor before organ retrieval. Levels of KIM-1 were not associated with the perfusion parameters (P=0.649) or renal function in the donor (R=0.02458; P=0.271).

CONCLUSION: The measurement of urinary biomarkers, particularly NGAL in combination with functional perfusion parameters and the EVKP score provides an informative measure of kidney quality which may aid the decision to transplant the kidney. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

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Clinical and safety outcomes of laparoscopic nephrectomy with renal autotransplantation for the loin pain-hematuria syndrome: A 14-year longitudinal cohort study.
Zubair AS; Cheungpasitporn W; Erickson SB; Prieto M.
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[Journal Article]
UI: 27186938
OBJECTIVE: The objective of this study is to assess clinical and safety outcomes after laparoscopic nephrectomy with autotransplantation for loin pain-hematuria syndrome (LPHS).
METHODS: We conducted telephone interviews using structured questionnaires and retrospectively reviewed data on all patients who underwent laparoscopic nephrectomy with autotransplantation for LPHS between January 2000 and May 2014.

RESULTS: A total of 24 laparoscopic nephrectomies with renal autotransplantation of 21 patients with LPHS refractory to conservative medical treatment were reviewed. 83% were female with a mean age of 31 years. Postoperatively, graft loss resulting in subsequent nephrectomy occurred in two patients; However, no patients died (median follow-up = 22 months, range 5-78) or required dialysis (median follow-up = 10 months, range 0.2-178). There was no significant difference in estimated glomerular filtration rate (eGFR) before and after surgery (100+/-22 vs. 97+/-23 ml/min/1.73 m²; P = 0.37). Among 14 patients (16 autotransplantation) with telephone follow-up, 14 (88%) resulted in pain relief and no operation resulted in worsening pain. All procedures resulted in immediate pain relief; pain recurrence was reported after 2 procedures. However, those patients had pain-free period up to 36 months. The quality of life was better after 15 (94%) auto-transplantation with higher employment rate (44% vs. 69%; P = 0.04). Two patients with graft loss reported better pain control and quality of life.

CONCLUSIONS: Renal auto-transplantation is a possible treatment option for LPHS refractory to conservative medical treatment. It can offer pain relief and better quality of life. Despite postoperative risk, it seems to be safe for survival and renal outcomes. This article is protected by copyright. All rights reserved.

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Robotic kidney transplantation: The Bakirkoy experience.

Tugcu V; Sener NC; Sahin S; Yavuzsan AH; Akbay FG; Apaydin S.

OBJECTIVE: Robotic kidney transplantation, first described by Hoznek and colleagues, and has been improved by investigators like Oberholzer and Menon. We realized the first robotic kidney transplant (RKT) in our clinic in December 2015. In this study, we aimed to present the first 15 cases we performed within 3 months.

MATERIAL AND METHODS: Starting from January 2016, we performed 15 RKTs in our hospital. Before surgery, the whole robotic procedure was thoroughly explained to the patients and their informed consents were taken.

RESULTS: We performed RKT in 7 male and 8 female patients. Mean patient age was 37.4±10.8 years. Mean body mass index of the patients was 22.6±3.35 kg/m2. Mean preoperative creatinine and hemoglobin levels were 6.14±2.12 mg/dL and 10.04±1.64 g/dL, respectively. Mean operative time was 300.3±104.2 minutes. Mean warm ischemia and re-warming times were 1.9±0.54 minutes and 73.3±30.7 minutes, respectively. We did not need any necessity to switch to open surgery, and any intraoperative complication did not develop in any patient. Lymphocele which is one of the most frequently encountered complications was not observed in our series.

CONCLUSION: We think that using a minimally invasive approach greater number of patients will be able to benefit from this treatment modality, and this important health issue may decrease significantly.

Status

In-Data-Review

Authors Full Name

Tugcu, Volkan; Sener, Nevzat Can; Sahin, Selcuk; Yavuzsan, Abdullah Hizar; Akbay, Fatih Gokhan; Apaydin, Suheyla.

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Massive Ascites in a Renal Transplant Patient after Laparoscopic Fenestration of a Lymphocele.

Kawaguchi S; Nohara T; Shima T; Matsuyama S; Nose C; Yamahana J; Kadono Y; Seto C; Kawabata M; Mizokami A.

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[Journal Article]

UI: 27891288

Retroperitoneal lymphocele is a common complication of renal transplantation. Here, we report the case of a 67-year-old woman with massive ascites after fenestration surgery for a lymphocele that developed following renal transplantation. She had been on continuous ambulatory peritoneal dialysis for 9 years. Living donor renal transplantation was performed and an intrapelvic lymphocele subsequently developed. The lymphocele did not resolve after aspiration therapy; therefore, laparoscopic fenestration was performed. Although the lymphocele disappeared, massive ascites appeared in its stead. Half a year later, the ascites was surgically punctured, which then gradually resolved and disappeared 6 weeks later. Aspiration therapy
should be considered in patients on long-term peritoneal dialysis, although laparoscopic fenestration is safe and effective.

Status
PubMed-not-MEDLINE

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20161128

Year of Publication
2016
Effect of the Obesity Epidemic on Kidney Transplantation: Obesity Is Independent of Diabetes as a Risk Factor for Adverse Renal Transplant Outcomes.

Kwan JM; Hajjiri Z; Metwally A; Finn PW; Perkins DL.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

[Journal Article]

UI: 27851743

BACKGROUND: Obesity is a growing epidemic in most developed countries including the United States resulting in an increased number of obese patients with end-stage renal disease. A previous study has shown that obese patients with end-stage renal disease have a survival benefit with transplantation compared with dialysis. However, due to serious comorbidities, many centers place restrictions on the selection of obese patients for transplantation. Further, due to obese patients having an increased risk of diabetes, it is unclear whether obesity can be an independent risk, independent of diabetes for increasing adverse renal transplant outcomes.

METHODS: To investigate the role of obesity in kidney transplantation, we used the Scientific Registry of Transplant Recipients database. After filtering for subjects that had the full set of covariates including age, gender, graft type, ethnicity, diabetes, peripheral vascular disease, dialysis time and time period of transplantation for our analysis, 191,091 subjects were included in the analyses. Using multivariate logistic regression analyses adjusted for covariates we determined whether obesity is an independent risk factor for adverse outcomes such as delayed graft function, acute rejection, urine protein and graft failure. Cox regression modeling was used to determine hazard ratios of graft failure.

RESULTS: Using multivariate model analyses, we found that obese patients have significantly increased risk of adverse transplant outcomes, including delayed graft function, graft failure, urine protein and acute rejection. Cox regression modeling hazard ratios showed that obesity also increased risk of graft failure. Life-table survival curves showed that obesity may be a risk factor independent of diabetes mellitus for a shorter time to graft failure.

CONCLUSIONS: A key observation in our study is that the risks for adverse outcome of obesity are progressive with increasing body mass index. Furthermore, pre-obese overweight recipients compared with normal weight recipients also had increased risks of adverse outcomes related to kidney transplantation.

Status
In-Data-Review

Authors Full Name
Kwan, Jennifer M; Hajjiri, Zahraa; Metwally, Ahmed; Finn, Patricia W; Perkins, David L.
Pharmacological Tie2 activation in kidney transplantation.
Thamm K; Njau F; Van Slyke P; Dumont DJ; Park JK; Haller H; David S.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 27683636
AIM: To investigate the therapeutic potential of vasculotide (VT) - a Tie2 activating therapeutic - in kidney transplantation.
METHODS: We performed a murine MHC-mismatched renal transplant model (C57Bl/6 male into Balb/c female) with 60 min cold and 30 min warm ischemia time. 500 ng VT was administered i.p. to donor mice 1 h before organ removal. In addition, recipients received 500 ng VT i.p. directly and 3 d after surgery. Survival was monitored and remaining animals were sacrificed 28 d after
transplantation. In this model, we analyzed: (1) organ function; (2) Kaplan-Meier survival; (3) organ damage (periodic acid Schiff staining) via semi-quantitative scoring [0-4 (0 = no injury/inflammation to 4 = very severe injury/inflammation)]; (4) expression of renal endothelial adhesion molecules (ICAM-1) via immunofluorescence (IF) staining, immunoblotting and qPCR; (5) infiltration of inflammatory cells (IF Gr-1, F4/80); and (6) fibrosis via staining of alpha-smooth muscle actin (alphaSMA), Sirius red staining and immunoblotting of SMAD3 activation.

RESULTS: Exogenous activation of Tie2 with VT resulted in diminished expression of peritubular and glomerular endothelial adhesion molecules. Consequently, infiltration of inflammatory cells (analyzed as ICAM-1, Gr-1 and F4/80 positive cells) was reduced in VT-treated mice compared to controls. Additionally, VT was protective against fibrogenesis after kidney transplantation. Trends towards lower serum creatinine (vehicle: 142 +/- 17 mumol/L vs VT: 94 +/- 23 mumol/L), urea (vehicle: 76 +/- 5 mmol/L vs VT: 60 +/- 8 mmol/L) and lactate dehydrogenase (vehicle: 1288 +/- 383 iU vs VT: 870 +/- 275 iU) were observed on day 6 after transplantation. Kaplan-Meier survival analysis showed improved survival rates in the VT-treated mice that did not reach statistical significance (27% vs 54%, P = 0.24, n = 11 per group). Exogenous activation of Tie2 via VT might reduce infiltration of inflammatory cells into renal tissue thereby protecting the transplant from early graft dysfunction potentially affecting long-term function.

CONCLUSION: Protection of the endothelial microvasculature via the Tie2 axis in the early transplant setting might hold promise as a therapeutic target.
177.
Cienfuegos-Belmonte IR; Leon-Duenas E; Roman-Martin AA; Olmo-Ruiz M; Gonzalez-Roncero FM; Medina-Lopez RA.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 26992850
INTRODUCTION: Indicators show the presence of a phenomenon and its intensity. They assess the level of quality care and identify potential situations for improvement. Our objective is to assess the 2013 and 2014 quality care indicators of our department's kidney transplantation area.
MATERIAL AND METHOD: For 2013 and 2014, we reviewed 88 and 106 kidney transplants and 47 and 66 extractions. We evaluated the quality care indicators developed by the Spanish Urological Association, analysing the results with the SPSS v 21.0 programme.
RESULTS: The mean cold ischaemia time (CIT) was 14.96 hours in 2013 and 18.07 hours in 2014. The CIT was <=18h in 53% and 56% of cadaveric donor kidneys in 2013 and 2014,
respectively. The rate of relevant early onset urinary fistulae was 1.14% and 2.83% for each year. The rate of early transplantectomy due to a vascular complication was 3.41% and 2.83% for 2013 and 2014, respectively. Overall patient survival at 1 year was 100% for both periods, and graft survival at 1 year was 95% and 94.34% for 2013 and 2014, respectively. The rate of living-donor transplantation was 14.77% and 17.92%, and 92.31% and 68.42% of the living-donor extractions were laparoscopic for 2013 and 2014, respectively. Resident medical interns were the first surgeon in 6.67% and 12.64% of the transplantations and in 55.88% and 19.14% of the cadaveric extractions during 2013 and 2014, respectively.

CONCLUSIONS: During the evaluated period, all quality care standards in kidney transplantation were met, except for CIT in both years and resident medical intern participation in kidney implantation in 2013. This analysis promotes improvements in quality care, highlighting weak spots that need work.

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Status
In-Process

Authors Full Name
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Institution

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20160927

Year of Publication
2016
Hand-Assisted Laparoscopic Donor Nephrectomy in Complete Situs Inversus.
Gahagan JV; Whealon MD; Reddy U; Foster CE 3rd; Ichii H.
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[Journal Article]
UI: 27579434

Complete situs inversus is a rare congenital anomaly characterized by transposition of organs. We report a case of renal transplantation using a kidney from a living complete situs inversus donor. The recipient was a 59-year-old female with end-stage renal disease because of type 2 diabetes mellitus. The donor was the 56-year-old sister of the recipient with complete situs inversus. CT angiogram of the abdomen and pelvis showed complete situs inversus and an otherwise normal appearance of the bilateral kidneys with patent bilateral single renal arteries and longer renal vein in the right kidney. The patient was taken to the operating room for a hand-assisted laparoscopic right donor nephrectomy. The patient tolerated the procedure well and was discharged home in good condition on postoperative day 1. The recipient experienced no episodes of acute rejection or infection, with serum creatinine levels of 0.8-1.2mg/dL. Laparoscopic donor nephrectomy in a patient with complete situs inversus remains a technically feasible operation and the presence of situs inversus should not preclude consideration for living kidney donation.

Status
PubMed-not-MEDLINE

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Foster, Clarence E 3rd. Department of Surgery, University of California, Irvine School of Medicine, Orange, California.
Kidney transplantation in obese patients. [Review]
Tran MH; Foster CE; Kalantar-Zadeh K; Ichii H.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Review]
UI: 27011911
The World Health Organization estimated that in 2014, over 600 million people met criteria for obesity. In 2011, over 30% of individuals undergoing kidney transplant had a body mass index (BMI) 35 kg/m(2) or greater. A number of recent studies have confirmed the relationship between overweight/obesity and important comorbidities in kidney transplant patients. As with non-transplant surgeries, the rate of wound and soft tissue complications are increased following transplant as is the incidence of delayed graft function. These two issues appear to contribute to longer length of stay compared to normal BMI. New onset diabetes after transplant and cardiac outcomes also appear to be increased in the obese population. The impact of obesity on patient survival after kidney transplantation remains controversial, but appears to mirror the impact of extremes of BMI in non-transplant populations. Early experience with (open and laparoscopic) Roux-en-Y gastric bypass and laparoscopic sleeve gastrectomy support excellent weight loss (in the range of 50%-60% excess weight lost at 1 year), but experts have recommended the need for further studies. Long term nutrient deficiencies remain a concern but in general, these procedures do not appear to adversely impact absorption of immunosuppressive medications. In this study, we review the literature to arrive at a better understanding of the risks related to renal transplantation among individuals with obesity.
Impact of Endovascular Aortic Aneurysm Repair in a Renal Transplantation Program.
Machado R; Antunes I; Oliveira P; Loureiro L; Almeida P; Pereira C; de Almeida R.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 27395811

BACKGROUND: An increasing number of abdominal aortic aneurysms (AAAs) may occur in
renal failure patients waiting for kidney transplantation because of sharing atherosclerotic risk
factors. There is increasing possibility to diagnose an AAA in this group, where treatment has some particularities. After aneurysm treatment these patients remain candidates to kidney transplantation. Similarly, there is an increasing possibility to diagnose AAA in kidney transplantation recipients. Our aim is to present our experience and review the published literature.

METHODS: We studied the patients who underwent endovascular aneurysm repair (EVAR) and were later submitted to kidney transplantation, and the patients who underwent kidney transplantation and were later diagnosed with AAA and treated by EVAR.

RESULTS: Our experience with renal transplantation began in 1987 and with EVAR in 2001. We performed EVAR in 3 kidney transplantation recipients, without complications as endoleaks or loss of the transplanted kidney. We performed kidney transplantation in 2 patients who underwent EVAR.

CONCLUSIONS: As patients waiting for kidney transplantation wait for several months to years, necessity to treat the aortic aneurysm is sometimes imperative. EVAR is the preferred method in this high-risk group with the particularity of necessity to preserve the internal/external iliac arteries to allow anastomosis between renal artery of the transplanted kidney and recipient's iliac artery. Ensuring this, kidney transplantation remains possible and we did not detect differences in comparison with a regular procedure. Kidney transplantation recipients have some particularities as immunosuppressive therapy; in this group, EVAR was recognized as less aggressive and with less impact in renal function.

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Status
In-Process

Authors Full Name
Machado, Rui; Antunes, Ines; Oliveira, Pedro; Loureiro, Luis; Almeida, Paulo; Pereira, Carlos; de Almeida, Rui.

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Unusual presentation of phaeochromocytoma.
Hope DC; Palan JM.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
BMJ Case Reports. 2016, 2016 May 10.
[Journal Article]
UI: 27166010
A 44-year-old woman, with a background of heart, lung and renal transplantation secondary to cystic fibrosis and type 1 diabetes, presented with tachycardia, hyperglycaemia, nausea and vomiting. She was initially managed for diabetic ketoacidosis with severe dehydration. However, persistent episodic hypertension and tachycardia led the investigating team to identify significantly raised urinary metanephrines and a left-sided adrenal mass; Iodine-123-meta-iodobenzylguanidine single photon emission computer tomography scan (MIBG SPECT/CT) showed avid uptake of tracer, confirming a left-sided phaeochromocytoma. She was started on medical management and is awaiting an elective laparoscopic procedure. This case describes the presentation of a unilateral phaeochromocytoma as ketoacidosis in a patient with type 1 diabetes with no other apparent precipitant. This highlights the metabolic counter-regulatory effect of excess catecholamines in addition to the inotropic/chronotropic effects that are associated with this adrenal tumour. Recognition of atypical signs and symptoms may point towards an atypical precipitant of diabetic ketoacidosis—a medical emergency presenting to front-line clinicians.

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Status
In-Process
BACKGROUND: Autosomal dominant polycystic kidney disease (ADPKD) is the most common hereditary kidney disease in Western countries. The prevalence is between 2.4/10,000 and 3.9/10,000. ADPKD represents a systemic disease resulting in deterioration in renal function. Until now, mutations in two genes (PKD1 and PKD2) have been identified. Recently, the European Medicines Agency (EMA) approved the use of the vasopressin V2 receptor antagonist tolvaptan to slow the progression of cyst development and renal insufficiency connected with ADPKD in adult patients with chronic kidney disease stages 1-3 at initiation of treatment with evidence of rapidly progressing disease. Whereas the EMA approved the release of tolvaptan, the US Food and Drug Administration (FDA) requested further data on side effects and the selection of patient cohorts who may benefit from treatment.

SUMMARY: This review focused on advances in the management and treatment of ADPKD in Western countries.

KEY MESSAGE: ADPKD represents the fourth most common cause of end-stage renal disease (ESRD) in Western countries. ADPKD is a multisystemic disease characterized by the progressive development of bilateral renal cysts, resulting in enlargement of the kidney volume due to cystic formations, hypertension, hematuria, and loss of renal function. ADPKD is
associated with high inter- and intrafamilial variability in disease appearance and progression. Patients with PKD1 mutations typically have a more severe phenotype than those with PKD2 mutations. ADPKD is under intensive investigation. Vasopressin and the associated cyclic adenosine monophosphate-related signaling pathways have been demonstrated to be important contributors to cyst growth in ADPKD. Supportive treatments are recommended with the aim of reducing morbidity and mortality associated with disease manifestations. In the past years, several agents have been investigated in ADPKD patients, including mTOR inhibitors, somatostatin analogs, statins, and vasopressin V2 receptor antagonists.

FACTS FROM EAST AND WEST: (1) ADPKD is diagnosed globally by ultrasound detection of kidney enlargement and presence of cysts. Recent analyses of variants of the PKD1 and PKD2 genes by next-generation sequencing in Chinese and Western ADPKD patients might lead to the development of reliable genetic tests. (2) Besides lifestyle changes (low-salt diet, sufficient fluid intake, and no smoking), blood pressure control is the primary nonspecific treatment recommended by Kidney Disease - Improving Global Outcomes (KDIGO) for ADPKD patients. How low the blood pressure target should be and what the means of achieving it are remain open questions depending on the severity of chronic kidney disease and the age of the patients. In a recent Chinese study, diagnostic needle aspiration and laparoscopic unroofing surgery successfully improved infection, pain, and hypertension. Peritoneal dialysis was found to be a feasible treatment for most Chinese ADPKD patients with ESRD. In most Western centers, patients without contraindication are selected for peritoneal dialysis. Kidney transplantation with concurrent bilateral nephrectomy was successful in relieving hypertension and infection in Chinese ADPKD patients. In Western countries, sequential surgical intervention with kidney transplantation after nephrectomy, or the other way round, is preferred in order to reduce risks. (3) The vasopressin 2 receptor antagonist tolvaptan was approved in Europe, Canada, Japan, and Korea to slow down progression of kidney disease in ADPKD patients. Tolvaptan is not yet approved in the USA or in China. mTOR pathway-targeting drugs are currently under evaluation: mTOR inhibitors could slow down the increase in total kidney volume in a cohort of Western and Japanese ADPKD patients. Western studies as well as an ongoing study in China failed to show benefit from rapamycin. A study performed in Italy indicates protective effects of the somatostatin analog octreotide in ADPKD patients. Western and Chinese studies revealed a potential beneficial effect of triptolide, the active substance of the traditional Chinese medicine Tripterygium wilfordii (Lei Gong Teng) to prevent worsening in ADPKD patients.

Status
In-Data-Review
Authors Full Name
Sommerer, Claudia; Zeier, Martin.
Institution
The Clinical Manifestation and Management of Autosomal Dominant Polycystic Kidney Disease in China. [Review]
Xue C; Zhou CC; Wu M; Mei CL.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Review. Journal Article]
UI: 27921038
BACKGROUND: Autosomal dominant polycystic kidney disease (ADPKD) is the most common monogenic hereditary kidney disease characterized by progressive enlargement of renal cysts. The incidence is 1-2 worldwide. Mutations in two genes (PKD1 and PKD2) cause ADPKD. Currently, there is no pharmaceutical treatment available for ADPKD patients in China. Summary: This review focused on advances in clinical manifestation, gene diagnosis, risk factors, and management of ADPKD in China. There is an age-dependent increase in total kidney volume (TKV) and decrease in renal function in Chinese ADPKD patients. ADPKD is more severe in males than in females. Great progress has been made in molecular diagnosis in the last two decades. Nephrologists found many novel PKD mutations in Chinese ADPKD patients early through polymerase chain reaction, and then through liquid chromatography in 2000s, and recently through next-generation sequencing. Major predictive factors for ADPKD progression are age, PKD genotype, sex, estimated glomerular filtration rate (eGFR), and TKV. With respect to the management of ADPKD, inhibitors targeting mTOR and cAMP are the focus of clinical trials. Triptolide has been used to treat ADPKD patients in clinical trials in China. Triptolide significantly protected eGFR of ADPKD patients compared with placebo.
KEY MESSAGES: ADPKD affects about 1.5 million people in China. An additional PKD gene besides PKD1 and PKD2 was not found in the Chinese. The prevalence of intracranial aneurysm in Chinese ADPKD patients was 12.4%. The predictive factors for eGFR decrease in Chinese ADPKD patients are TKV, proteinuria, history of hypertension, and age. The treatment strategies in clinical trials for ADPKD patients in China are similar to those in the West except for triptolide.

FACTS FROM EAST AND WEST: (1) ADPKD is diagnosed globally by ultrasound detection of kidney enlargement and presence of cysts. Recent analyses of variants of the PKD1 and PKD2 genes by next-generation sequencing in Chinese and Western ADPKD patients might lead to the development of reliable genetic tests. (2) Besides lifestyle changes (low-salt diet, sufficient fluid intake, and no smoking), blood pressure control is the primary nonspecific treatment recommended by Kidney Disease - Improving Global Outcomes (KDIGO) for ADPKD patients. How low the blood pressure target should be and what the means of achieving it are remain open questions depending on the severity of chronic kidney disease and the age of the patients. In a recent Chinese study, diagnostic needle aspiration and laparoscopic unroofing surgery successfully improved infection, pain, and hypertension. Peritoneal dialysis was found to be a feasible treatment for most Chinese ADPKD patients with end-stage renal disease. In most Western centers, patients without contraindication are selected for peritoneal dialysis. Kidney transplantation with concurrent bilateral nephrectomy was successful in relieving hypertension and infection in Chinese ADPKD patients. In Western countries, sequential surgical intervention with kidney transplantation after nephrectomy, or the other way round, is preferred in order to reduce risks. (3) The vasopressin 2 receptor antagonist tolvaptan was approved in Europe, Canada, Japan, and Korea to slow down progression of kidney disease in ADPKD patients. Tolvaptan is not yet approved in the USA or in China. mTOR pathway-targeting drugs are currently under evaluation: mTOR inhibitors could slow down the increase in total kidney volume in a cohort of Western and Japanese ADPKD patients. Western studies as well as an ongoing study in China failed to show benefit from rapamycin. A study performed in Italy indicates protective effects of the somatostatin analog octreotide in ADPKD patients. Western and Chinese studies revealed a potential beneficial effect of triptolide, the active substance of the traditional Chinese medicine Tripterygium wilfordii (Lei Gong Teng) to prevent worsening in ADPKD patients.

Status
In-Data-Review
Authors Full Name
Xue, Cheng; Zhou, Chen-Chen; Wu, Ming; Mei, Chang-Lin.
Institution

Christopoulos P; Faryal A; Dosani M; Rix D; Talbot D.

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[Journal Article]

UI: 27895453

BACKGROUND: Kidney transplantation is the definite surgical treatment for end-stage renal disease. Shortage of organs and the increasing number of patients with end-stage renal disease has led to an expansion of the selection criteria promoting the use of organs from marginal donors. Use of kidneys with renal artery aneurysm (RAA) is one such example. Description of the case: We report a case of living-related kidney transplantation from a 46-year-old female donor with unilateral RAA to her 68-year-old father. The pre-operative donor's assessment with a computed tomography angiogram revealed a saccular aneurysm of the left renal artery. The transplant team proceeded to the left nephrectomy, surgical ex vivo repair of the aneurysm and transplantation of this kidney to the recipient, with the total ischemic time of 130 minutes. At revascularization, there was no anastomotic leak with good perfusion of the organ and normal postoperative kidney function.
CONCLUSION: RAA is a rare renal anatomical abnormality with unproven clinical significance. Advanced microvascular surgical techniques can be used to repair the aneurysm with subsequent successful use for transplantation. Hippokratia 2016, 20(1): 90-92.

Status
In-Data-Review

Authors Full Name
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20161129

Year of Publication
2016

The influence of warm ischemia elimination on kidney injury during transplantation - clinical and molecular study.
Kaminska D; Koscielska-Kasprzak K; Chudoba P; Halon A; Mazanowska O; Gomolkiewicz A; Dziegiel P; Druis-Fajdasz D; Myszka M; Lepiesza A; Polak W; Boratynska M; Klinger M.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Scientific Reports. 6:36118, 2016 Nov 03.
[Journal Article]
UI: 27808277
Kidney surface cooling was used during implantation to assess the effect of warm ischemia elimination on allograft function, histological changes and immune-related gene expression. 23 recipients were randomly assigned to a group operated on with kidney surface cooling during implantation (ice bag technique, IBT group), and the other 23 recipients receiving the contralateral kidney from the same donor were operated on with a standard technique. Three consecutive kidney core biopsies were obtained during the transplantation procedure: after organ recovery, after cold ischemia and after reperfusion. Gene expression levels were determined using low-density arrays (Format 32, TaqMan). The IBT group showed a significantly lower rate of detrimental events (delayed graft function and/or acute rejection, p=0.015) as well as higher glomerular filtration rate on day 14 (p=0.026). A greater decrease of MMP9 and LCN2 gene expression was seen in the IBT group during total ischemia (p=0.003 and p=0.018). Elimination of second warm ischemia reduced the number of detrimental events after kidney transplantation, and thus had influence on the short-term but not long-term allograft function. Surface cooling of the kidney during vascular anastomosis may reduce some detrimental effects of immune activation resulting from both brain death and ischemia-reperfusion injury.

Status
In-Data-Review

Authors Full Name
Kaminska, Dorota; Koscielska-Kasprzak, Katarzyna; Chudoba, Pawel; Halon, Agnieszka; Mazanowska, Oktawia; Gomolkiewicz, Agnieszka; Dziegiel, Piotr; Drulis-Fajdasz, Dominika; Myszka, Marta; Lepiesza, Agnieszka; Polak, Wojciech; Boratynska, Maria; Klinger, Marian.

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OBJECTIVES: The aim of this study was to investigate novel and easily applicable preservation perfusion techniques in kidney grafts obtained from donors after circulatory death (DCD).

BACKGROUND: A novel perfusion approach, hypothermic oxygenated perfusion (HOPE), used for DCD liver grafts, is based on cold perfusion for 1 hour by an oxygenated solution before implantation. Here, we aimed to test HOPE in a rodent model of kidney grafts associated with substantial warm ischemia.

METHODS: Rat kidneys were exposed to 30 minutes in situ warm ischemia, without application of heparin. Kidneys were removed and cold stored for 4 and 18 hours, mimicking DCD organ procurement and conventional preservation. In additional experiments, kidneys were normothermically perfused with oxygenated blood for 1 hour after cold storage. In a third group,
Kidneys were perfused by HOPE for 1 hour after cold storage. In each group, orthotopic kidney transplantation was performed after recipient nephrectomy.

RESULTS: HOPE-treated DCD kidneys showed dramatically better function after transplantation, than cold-stored grafts in terms of nuclear injury, macrophage activation, endothelium activation, tubulus damage, and graft function. A short period of warm oxygenated perfusion before implantation improved graft quality as compared with cold storage, but was significantly less effective in all endpoints compared with HOPE. The effect of HOPE was dependent on perfusate oxygenation in the cold.

CONCLUSIONS: HOPE of DCD kidneys was superior to other clinically used preservation approaches, consistent to earlier results in livers. On the basis of this, we assume a strong and generalized effect on solid organ viability by HOPE before transplantation. These results justify a clinical trial.

Status
In-Data-Review

Authors Full Name
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20160901

Year of Publication
2016

187.
The Utility of Routine Ultrasound Imaging after Elective Transplant Ureteric Stent Removal.
Das B; Hobday D; Olsburgh J; Callaghan C.
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[Journal Article]
UI: 27493793
Background. Ureteric stent insertion during kidney transplantation reduces the incidence of major urological complications (MUCs). We evaluated whether routine poststent removal graft ultrasonography (PSRGU) was useful in detecting MUCs before they became clinically or biochemically apparent. Methods. A retrospective analysis was undertaken of clinical outcomes following elective stent removals from adult single renal transplant recipients (sRTRs) at our centre between 1 January 2011 and 31 December 2013. Results. Elective stent removal was performed for 338 sRTRs. Of these patients, 222 had routine PSRGU (median (IQR) days after stent removal = 18 (11-31)), 79 had urgent PSRGU due to clinical or biochemical indications, 12 had CT imaging, and 25 had no further renal imaging. Of the 222 sRTRs who underwent routine PSRGU, 210 (94.6%) had no change of management, three (1.4%) required repeat imaging only, and eight patients (3.6%) had incidental (nonureteric) findings. One patient (0.5%) had nephrostomy insertion as a result of routine PSRGU findings, but no ureteric stenosis was identified. Of 79 patients having urgent PSRGU after elective stent removal, three patients required transplant ureteric reimplantation. Conclusions. This analysis found no evidence that routine PSRGU at two to three weeks after elective stent removal provides any added value beyond standard clinical and biochemical monitoring.

Status
PubMed-not-MEDLINE

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20160805

Year of Publication

Islam AK; Knight RJ; Mayer WA; Hollander AB; Patel S; Teeter LD; Graviss EA; Saharia A; Podder H; Asham EH; Gaber AO.

Background. Acceptance of dual kidney transplantation (DKT) has proven difficult, due to surgical complexity and concerns regarding long-term outcomes. We herein present a standard technique for ipsilateral DKT and compare outcomes to single-kidney transplant (SKT) recipients. Methods. A retrospective single-center comparison of DKT and SKT performed between February 2007 and July 2013. Results. Of 516 deceased donor kidney transplants, 29 were DKT and 487 were SKT. Mean follow-up was 43 +/- 67 months. DKT recipients were older and more likely than SKT recipients to receive an extended criteria graft (p < 0.001). For DKT versus SKT, the rates of delayed graft function (10.3 versus 9.2%) and acute rejection (20.7 versus 22.4%) were equivalent (p = ns). A higher than expected urologic complication rate in the DKT cohort (14 versus 2%, p < 0.01) was reduced through modification of the ureteral anastomosis. Graft survival was equivalent between DKT and SKT groups (p = ns) with actuarial 3-year DKT patient and graft survivals of 100% and 93%. At 3 years, the groups had similar renal function (p = ns). Conclusions. By utilizing extended criteria donor organs as DKT, the donor pool was enlarged while providing excellent patient and graft survival. The DKT urologic complication rate was reduced by modification of the ureteral anastomosis.

Status
PubMed-not-MEDLINE

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189.

Benefits and Complications of Removing Ureteral Stent Based on the Elapsed Time After Renal Transplantation Surgery.

Dadkhah F; Yari H; Ali Asgari M; Fallahnezhad MH; Tavoosian A; Ghadian A.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

[Journal Article]
BACKGROUND: The most important surgical complications of renal transplantation are stenosis and obstruction of anastomosis of the ureter to the bladder. Although the routine use of the ureteral stents to prevent such complications seems rational, the optimal time to keep the ureteral stent is still controversial.

OBJECTIVES: This study presents the benefits and complications of removing the ureteral stent based on the elapsed time after the surgery.

PATIENTS AND METHODS: All patients who underwent kidney transplantation between May 2011 and August 2014 in Modarres hospital, Tehran, Iran, were enrolled in the study. The patients were classified into three groups. The ureteral stent was removed 10, 20, and 30 days after the transplantation in these groups.

RESULTS: A total of 529 patients underwent kidney transplant surgery in our center. Urologic complications among the three groups consisting of hydronephrosis, urinoma and collection did not have statistically significant differences.

CONCLUSIONS: Ureteral stent can be picked up with no increased risk of urologic complications at shorter intervals after the kidney transplantation surgery.

Status
PubMed-not-MEDLINE

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https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4877670

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20160527
BACKGROUND: The most important surgical complications of renal transplantation are stenosis and obstruction of the ureterovesical anastomosis. Routine use of ureteral stents can prevent this complication, but the optimal time for ureteral stent use is still controversial.

OBJECTIVES: The purpose of this study is to compare the benefits and complications of early and delayed stent removal after surgery. Early ureteral stent removal can decrease some complications, such as urinary tract infections (UTIs), bladder irritation symptoms, persistent hematuria, and the risk of stent crusting; its benefits include easier stent removal and shorter hospitalization time.

PATIENTS AND METHODS: All patients who underwent kidney transplantation from May 2011 until March 2012 in Modarres Hospital were included in this study. We classified the patients into three groups, based on time of stent removal (10, 20, and 30 days after transplantation).

RESULTS: Ninety-one patients were studied; urologic complications (hydroureteronephrosis and urinoma) in these three groups were analyzed and showed no statistical significant difference.

CONCLUSIONS: We can remove the ureteral stent earlier after kidney transplantation with no increase in the prevalence of surgical complications.
191.
Imaging-based diagnosis of acute renal allograft rejection. [Review]
Tholking G; Schuette-Nuetgen K; Kentrup D; Pawelski H; Reuter S.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Review]
UI: 27011915
Kidney transplantation is the best available treatment for patients with end stage renal disease. Despite the introduction of effective immunosuppressant drugs, episodes of acute allograft
rejection still endanger graft survival. Since efficient treatment of acute rejection is available, rapid diagnosis of this reversible graft injury is essential. For diagnosis of rejection, invasive core needle biopsy of the graft is the "gold-standard". However, biopsy carries the risk of significant graft injury and is not immediately feasible in patients taking anticoagulants. Therefore, a non-invasive tool assessing the whole organ for specific and fast detection of acute allograft rejection is desirable. We herein review current imaging-based state of the art approaches for non-invasive diagnostics of acute renal transplant rejection. We especially focus on new positron emission tomography-based as well as targeted ultrasound-based methods.

Status
PubMed-not-MEDLINE

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2016
Heparin-induced thrombocytopenia in solid organ transplant recipients: The current scientific knowledge. [Review]
Assfalg V; Huser N.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Review]
UI: 27011914
Exposure to heparin is associated with a high incidence of immunization against platelet factor 4 (PF4)/heparin complexes. A subgroup of immunized patients is at risk of developing heparin-induced thrombocytopenia (HIT), an immune mediated prothrombotic adverse drug effect. Transplant recipients are frequently exposed to heparin either due to the underlying end-stage disease, which leads to listing and transplantation or during the transplant procedure and the perioperative period. To review the current scientific knowledge on anti-heparin/PF4 antibodies and HIT in transplant recipients a systematic PubMed literature search on articles in English language was performed. The definition of HIT is inconsistent amongst the publications. Overall, six studies and 15 case reports have been published on HIT before or after heart, liver, kidney, and lung transplantation, respectively. The frequency of seroconversion for anti-PF4/heparin antibodies ranged between 1.9% and 57.9%. However, different methods to detect anti-PF4/heparin antibodies were applied. In none of the studies HIT-associated thromboembolic events or fatalities were observed. More importantly, in patients with a history of HIT, reexposure to heparin during transplantation was not associated with thrombotic complications. Taken together, the overall incidence of HIT after solid organ transplantation seems to be very low. However, according to the current knowledge, cardiac transplant recipients may have the highest risk to develop HIT. Different alternative suggestions for heparin-free anticoagulation have been reported for recipients with suspected HIT albeit no official recommendations on management have been published for this special collective so far.
Status
PubMed-not-MEDLINE
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Assfal, Volker; Huser, Norbert.
Institution
Innovative Applications of Robotic Surgery: Renal Allograft and Autologous Transplantation. [Review]
Lee J; Ordon M.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Review]
UI: 26918179
Robotic surgery has enabled surgeons to offer more patients a minimally invasive surgical option in the management of their complex diseases. While renal transplantation is associated with significant improvements in quantity and quality of life for most end-stage renal disease (ESRD) patients, it is also not devoid of its surgical risks and potential morbidities. Robotic-assisted kidney transplantation is a recently described, innovative application of the robotic surgery platform, and early experiences suggest that it is associated with comparable graft function and lower rates of complications. Urinary tract obstruction, though less common than ESRD, can be a serious threat to renal function. Severe ureteric stricture disease can represent a clinically complex problem requiring major reconstructive surgery. Completely intra-corporeal robotic renal auto-transplantation is another innovative application of the robotic surgery platform and represents a significant advancement in urologic surgery. Initial reports of this procedure demonstrate safety, feasibility, and excellent renal function outcomes.
Status
194.
Novel method of laparoendoscopic single-site and natural orifice specimen extraction for live donor nephrectomy: single-port laparoscopic donor nephrectomy and transvaginal graft extraction.
Jeong WJ; Choi BJ; Hwang JK; Yuk SM; Song MJ; Lee SC.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 26878020
Laparoscopic live donor nephrectomy (DN) has been established as a useful alternative to the traditional open methods of procuring kidneys. To maximize the advantages of the laparoendoscopic single-site (LESS) method, we applied natural orifice specimen extraction to LESS-DN. A 46-year-old woman with no previous abdominal surgery history volunteered to donate her left kidney to her husband and underwent single-port laparoscopic DN with transvaginal extraction. The procedure was completed without intraoperative complications. The kidney functioned well immediately after transplantation, and the donor and recipient were
respectively discharged 2 days and 2 weeks postoperatively. Single-port laparoscopic DN and transvaginal graft extraction is feasible and safe.

Status
PubMed-not-MEDLINE

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20160215

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2016

195.
The Impact of Arteriovenous Fistulae for Hemodialysis on the Cardiovascular System. [Review] Rao NN; Dundon BK; Worthley MI; Faull RJ.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Seminars in Dialysis. 29(3):214-21, 2016 May.[Journal Article. Review]
An arteriovenous fistula (AVF) is critical for the provision of optimal chronic hemodialysis. Its creation causes significant hemodynamic alterations in cardiovascular parameters, and can result in progressive left and right heart failure. Despite successful kidney transplantation, many patients retain a functional AVF indefinitely, which may contribute to ongoing adverse cardiovascular outcomes. A similar high risk:benefit ratio may exist in peritoneal dialysis patients with "backup" AVF.

UI: 26756565

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N-octanoyl dopamine treatment exerts renoprotective properties in acute kidney injury but not in renal allograft recipients.

Klotz S; Pallavi P; Tsagopgiorgas C; Zimmer F; Zollner FG; Binzen U; Greffrath W; Treede RD; Walter J; Harmsen MC; Kramer BK; Hafner M; Yard BA; Hoeger S.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
BACKGROUND: N-octanoyl dopamine (NOD) treatment improves renal function when applied to brain dead donors and in the setting of warm ischaemia-induced acute kidney injury (AKI). Because it also activates transient receptor potential vaniloid type 1 (TRPV1) channels, we first assessed if NOD conveys its renoprotective properties in warm ischaemia-induced AKI via TRPV1 and secondly, if renal transplant recipients also benefit from NOD treatment.

METHODS: We induced warm renal ischaemia in Lewis, wild-type (WT) and TRPV1(-/-) Sprague-Dawley (sd) rats by clamping the left renal artery for 45 min. Transplantations were performed in allogeneic and syngeneic donor-recipient combinations (Fisher to Lewis and Lewis to Lewis) with a cold ischaemia time of 20 h. Treatment was instituted directly after restoration of organ perfusion. Renal function, histology and perfusion were assessed by serum creatinine, microscopy and magnetic resonance imaging (MRI) using arterial spin labelling (ASL).

RESULTS: NOD treatment significantly improved renal function in Lewis rats after warm ischaemia-induced AKI. It was, however, not effective after prolonged cold ischaemia. The renoprotective properties of NOD were only observed in Lewis or WT, but not in TRPV1(-/-) sd rats. Renal inflammation was significantly abrogated by NOD. MRI-ASL showed a significantly lower cortical perfusion in ischaemic when compared with non-ischaemic kidneys. No overall differences were observed in renal perfusion between NOD- and NaCl-treated rats.

CONCLUSIONS: NOD treatment reduces renal injury in warm ischaemia, but is not effective in renal transplant in our experimental animal models. The salutary effect of NOD appears to be TRPV1-dependent, not involving large changes in renal perfusion.

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Status
In-Data-Review

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Year of Publication
2016

197.
Transplant Trajectory and Relational Experience Within Living Kidney Dyads.
Ummel D; Achille M.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Living kidney donation is considered common practice across most Westernized countries. While extensive research has documented the experience of living donors, few studies have addressed the perspective of recipients, and even fewer have examined the experience of donor and recipient as an interactive dyad. In this study, our aim was to examine the reciprocal influence between donors and recipients across the transplantation process. We recruited a homogeneous sample of 10 donors and recipients, who were interviewed individually. Data were analyzed using interpretative phenomenological analysis. The presentation of results follows the stages of the transplantation process: the disease experience, the experience of offering and accepting a kidney, the screening period, the surgery, and the post-transplantation period. Results are discussed within the framework of Mauss’s gift exchange theory, social roles, and altruism. This comprehensive description of the dyadic experience provides a way to frame and understand psychosocial aspects and relational implications of living renal transplantation.

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Modified Hand-Assisted Retroperitoneoscopic Living Donor Nephrectomy with a Mini-Open Muscle Splitting Gibson Incision.

Zhu YC; Lin J; Guo YW; Zhang L; Zhu X; Tian Y.
BACKGROUND: We aimed to confirm the advantages of a modified hand-assisted retroperitoneoscopic living donor nephrectomy (HARPLDN) compared to the performance of standard retroperitoneoscopic living donor nephrectomy (RPLDN).

METHODS: One hundred twenty-eight consecutive surgical cases were categorized into 2 groups, one receiving standard RPLDN (group 1) and one receiving modified HARPLDN (group 2). Perioperative factors of both groups were evaluated retrospectively, including donors' demographics, overall operating time, warm ischemia time (WIT), graft vessel length, blood loss, complications, pain visual analogue scale (VAS) scores, hospital stay, and matched recipients' perioperative outcomes. One-year follow-up data were also examined.

RESULTS: The standard RPLDN group (n = 44) and modified HARPLDN group (n = 84) had comparable age, gender, and body mass index. The RPLDN group donors had longer operative time, shorter vein length and longer WIT than the modified HARPLDN (all p < 0.001). RPLDN had higher VAS scores (p < 0.001), longer carminative time (p = 0.002) and higher morphine requirement (p = 0.039) than the modified HARPLDN. No complications occurred in either group. All recipients and grafts had survived at 1-year follow-up.

CONCLUSION: The modified HARPLDN technique is safe and effective for living donor nephrectomy and has shorter operating time, shorter WIT and better pain control. Further study is required to evaluate donors' long-term quality of life and recipients' long-term outcomes.

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20160831

Year of Publication
2016
Increasing Use of the Expanded Criteria for Living Kidney Donation and Good Outcomes of Living Kidney Donors in Korea.
Lim HJ; Jambaldorj E; Lee Y; Kang SS; Koo TY; Ahn C; Yang J.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Transplantation Proceedings. 48(7):2407-2411, 2016 Sep. [Journal Article]
UI: 27742310

BACKGROUND: Donor shortage for kidney transplantation may increase the number of expanded-criteria living donors (ECLDs). We investigated recent trends for ECLD use and the long-term outcomes of living kidney donors.

METHODS: We retrospectively analyzed medical records of 1,144 living kidney donors who donated at the Seoul National University Hospital from 1993 to 2015. The expanded criteria for living donation allow the following: age >=60 years, body mass index >30 kg/m2, history of hypertension, estimated glomerular filtration rate <80 mL/min, proteinuria or microscopic hematuria, and fasting glucose >100 mg/dL.

RESULTS: The mean age of donors was 40.7 +/- 10.8 years, and there were 600 women (52.4%). A total of 466 donors (40.7%) met the ECLD criteria, and the proportion of ECLDs increased over time. Only 5 donors died after donation over a median follow-up of 7 years. No donor developed end-stage renal disease (ESRD). A urine protein-creatinine ratio >=0.3 g/gCr was found in 14 patients and was more common in the ECLDs than in the standard-criteria living donors. The follow-up loss rate of donors was 59.3% at 5 years.

CONCLUSIONS: Both mortality and ESRD were very rare in carefully selected living kidney donors. However, living donors should be followed more carefully, because the follow-up loss rate was very high and ECLDs are increasingly used.

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Status
MEDLINE
Authors Full Name
Lim, H J; Jambaldorj, E; Lee, Y; Kang, S S; Koo, T Y; Ahn, C; Yang, J.
Institution
INTRODUCTION: Postoperative pain management in living kidney donor nephrectomy plays a key role in donor comfort and is important for the further acceptance of living kidney donation in times of organ shortage. Standard pain treatment (SPT) based on opioids is limited due to related side effects. Continuous infusion of local anesthetics (CILA) into the operative field is a promising alternative. The aim of this study was to evaluate whether CILA could reduce the dose of opioids.
in living kidney donors operated with hand-assisted retroperitoneoscopic donor nephrectomy (HARP).

METHODS: An observational study on 30 living donors was performed. The primary outcome was the difference of morphine equivalents (MEQ) administered between CILA and SPT.

RESULTS: On day 0 and 1, living donors with CILA received significant less MEQ compared to the SPT group, although on day 1 this effect was not statistically significant (day 0: 6.3 mg, interquartile range [IR] 4.2-11.2 vs 16.8 mg, IR 10.5-22.1, P = .009; day 1: 5.25 mg, IR 2.1-13.3 vs 13.3 mg, IR 6.7-23.8, P = .150). On days 2 and 3 there was no difference (day 2: 13.3 mg, IR 0.0-20.0 vs 13.3 mg, IR 6.7-13.3, P = .708; day 3: 13.3 mg, IR 0.0-26.7 vs 13.3 mg, IR 6.7-20, P = .825). Overall (days 0 to 3) MEQ was also less for CILA without reaching statistical significance (39.6 mg, IR 10.9-70.5 vs 59.6 mg, IR 42.4-72.9, P = .187).

CONCLUSIONS: CILA seems to be an effective instrument for donor pain management in the first 24 hours after HARP. Its effect abates by 48 hours after surgery, especially if highly potent nonopioids are given.

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Status

MEDLINE

Authors Full Name

Wahba, R; Kleinert, R; Hellmich, M; Kurschat, C; Heiermann, N; Dieplinger, G; Loser, J; Stippel, D L.

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Live donor study - implications of kidney donation on cardiovascular risk with a focus on lipid parameters including lipoprotein a.

Doucet B; Kostner K; Kaiser O; Hawley C; Isbel N.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]

UI: 27062186

In this prospective observational cohort study, we evaluate the change in cardiovascular risk parameters, with a focus on lipids, in live kidney donors 1 year post donation. Body mass index, systolic/diastolic blood pressure, kidney function (chromium-51 ethylenediaminetetraacetic acid estimated glomerular filtration) and lipid parameters were measured at baseline and 1 year. Data on 87 live kidney donors were collected. Body mass index increased from 26.5+/−2.7 pre to 27.4+/−3.0kg/m(2) post donation (p<0.0001). Chromium-51 ethylenediaminetetraacetic acid estimated glomerular filtration decreased from 111.8+/−20.0 pre to 72.1+/−13.1mL/min/1.73m(2) post donation (p<0.0001). Serum triglyceride levels increased from 0.8 (interquartile range 0.6-1.3) pre to 1.0mmol/L (interquartile range 0.7-1.6) post donation (p=0.0004). Statin use increased from 11.5% pre to 21% post donation (p<0.005). Low-density lipoprotein remained stable, and other lipids (high-density lipoprotein, apolipoprotein B and lipoprotein a) did not change post donation.

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Short-Term Preoperative Calorie and Protein Restriction Is Feasible in Healthy Kidney Donors and Morbidly Obese Patients Scheduled for Surgery.

Jongbloed F; de Bruin RW; Klaassen RA; Beekhof P; van Steeg H; Dor FJ; van der Harst E; Dolle ME; IJzermans JN.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Nutrients. 8(5), 2016 May 20.
[Journal Article. Multicenter Study. Randomized Controlled Trial]
UI: 27213441
INTRODUCTION: Surgery-induced oxidative stress increases the risk of perioperative complications and delay in postoperative recovery. In mice, short-term preoperative dietary and protein restriction protect against oxidative stress. We investigated the feasibility of a calorie- and protein-restricted diet in two patient populations.

METHODS: In this pilot study, 30 live kidney donors and 38 morbidly obese patients awaiting surgery were randomized into three groups: a restricted diet group, who received a synthetic liquid diet with 30% fewer calories and 80% less protein for five consecutive days; a group who received a synthetic diet containing the daily energy requirements (DER); and a control group. Feasibility was assessed using self-reported discomfort, body weight changes, and metabolic parameters in blood samples.

RESULTS: Twenty patients (71%) complied with the restricted and 13 (65%) with the DER-diet. In total, 68% of the patients reported minor discomfort that resolved after normal eating resumed. The mean weight loss on the restricted diet was significantly greater (2.4 kg) than in the control group (0 kg, p = 0.002), but not in the DER-diet (1.5 kg). The restricted diet significantly reduced levels of serum urea and plasma prealbumin (PAB) and retinol binding protein (RBP).

CONCLUSIONS: A short-term preoperative calorie- and protein-restricted diet is feasible in kidney donors and morbidly obese patients. Compliance is high and can be objectively measured via changes in urea, PAB, and RBP levels. These results demonstrate that this diet can be used to study the effects of dietary restriction on surgery-induced oxidative stress in a clinical setting.

Status

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2016

203.
A meta-analysis of renal outcomes in living kidney donors. [Review]
Li SS; Huang YM; Wang M; Shen J; Lin BJ; Sui Y; Zhao HL.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Medicine. 95(24):e3847, 2016 Jun.
Given the increased burden of end-stage renal disease (ESRD), renal outcomes of kidney donation by living donors are of particular interest. PubMed, ProQuest, MEDLINE, EMBASE, Chinese national knowledge infrastructure, and Wanfang databases were searched for clinical outcomes of living kidney donors (LKDs) including renal death, ESRD, proteinuria/albuminuria, and renal function after donation. We included 62 studies from 19 countries involving 114,783 kidney donors and nondonors to evaluate the renal consequences less than 6 months, 6 months to 5 years, 5 to 10 years, and 10 years onward after donation. The pooled data showed that uninephrectomy significantly decreased glomerular filtration rate and creatinine clearance rate in parallel with increased serum creatinine concentration (all P < 0.05). The drastic changes in renal function occurred within 6 months rather than 5 to 10 years after donation. Ten years and onward, rate of proteinuria/albuminuria increased gradually: microalbuminuria from 5.3% to 20.9%, proteinuria from 4.7% to 18.9%, and overt proteinuria from 2.4% to 5.7% (all P < 0.05). Prevalence of ESRD was 1.1%. All-cause mortality was 3.8% and all the renal deaths on average occurred 10 years postnephrectomy. LKDs might have aggravated glomerular filtration and creatinine clearance within 6 months after donation. Five years and onward, albuminuria, proteinuria, ESRD, and death might be the major concerns of LKDs. Long-term studies may clarify the survival time after donation.

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2016
Impact of grafting using thin upper pole artery ligation on living-donor adult kidney transplantation: The STROBE study.
Hiramitsu T; Okada M; Futamura K; Yamamoto T; Tsujita M; Goto N; Narumi S; Watarai Y.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Observational Study]
UI: 27759654
This study aimed to investigate the impact of grafting using thin upper pole artery ligation for living-donor adult kidney transplantation. Few reports have examined the safety of thin upper pole artery ligation. Between January 2008 and May 2015, 613 consecutive living-donor adult kidney transplantations were performed. We excluded 21 recipients who experienced graft loss due to factors that were unrelated to surgical complications and 3 recipients with grafts treated with arterial reconstruction and thin upper pole artery ligation for 3 arteries. We included 439 kidney grafts with single arteries (Single Artery Group), 123 with reconstructed arteries (Arterial Reconstruction Group) and 27 with ligated thin upper pole arteries (Arterial Ligation Group) in this retrospective cohort study. To evaluate the safety of thin upper pole artery ligation, we compared the Arterial Ligation Group with the Single Artery and Arterial Reconstruction groups. We evaluated the characteristics of the enrolled donors, recipients, and their grafts. Thereafter, we investigated recipients' perioperative and postoperative estimated glomerular filtration rate (eGFR) and complication rates. Significant differences among the 3 groups were identified for donor sex and endoscopic nephrectomy rates. Recipient eGFR and the complication rates were adjusted according to these factors. The perioperative and postoperative eGFR of recipients did not differ significantly in the Arterial Reconstruction and Single Artery groups with low complication rates. Thin upper pole artery ligation is a safe procedure for living-donor adult kidney transplantation and may prevent unnecessary arterial reconstruction and associated complications.
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Date Created
20161019
Obese Kidney Donors in the Laparoscopic Living Nephrectomy Era: How Safe?.
Marcelino A; Mochtar CA; Wahyudi I; Hamid AR.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

BACKGROUND Obesity is a major worldwide health problem, causing up to 3.4 million deaths per year. It is considered to be a relative contraindication for laparoscopic surgery. Laparoscopic living donor nephrectomy is the criterion standard procedure for kidney procurement in many transplant centers. However, the selection of the obese donors undergoing laparoscopic nephrectomies is still debatable. The objective of this study was to compare short-term results of obese donors and non-obese donors undergoing laparoscopic living donor nephrectomies.

MATERIAL AND METHODS A retrospective analysis of 259 live donors between November 2011 and August 2015 was performed. Body mass index equal to or more than 30 kg/m2 was categorized as obese. Twenty subjects were categorized as obese donors. We randomly assigned for 30 non-obese donors to the control group. Intra-operative and post-operative data were compared between these 2 groups. A p-value <=0.05 was considered a significant difference. RESULTS Donor characteristics were the same in the 2 groups. No significant differences were found in the first warm ischemic time, estimated blood loss, or postoperative pain. The operative time in the obese group was significantly longer than in the control group (270 vs. 245 min, p<=0.05). The hospital stay was also significantly longer in the obese group (4 vs. 3 days, p<=0.05). CONCLUSIONS At our hospital, obese donors had short-term results comparable to those of non-obese donors in laparoscopic living nephrectomy. While longer operative time and length of stay were found, there were no significant complications observed. Long-term outcomes should be evaluated to justify use of obese donors.
BACKGROUND: Neutrophil gelatinase-associated lipocalin (NGAL) is a biomarker for acute kidney injury. This study was conducted to determine the clinical implications of perioperative plasma NGAL levels for renal function after living donor nephrectomy.

METHODS: Between July 2013 and May 2014, 112 donors underwent live donor nephrectomy at our institution. Donor plasma NGAL levels were measured perioperatively for 6 months. The relationship between perioperative plasma NGAL and recovery of renal function was analyzed. Renal function was estimated with the Modification of Diet in Renal Disease formula.

RESULTS: Mean preoperative NGAL was 62.1 +/- 29.5 ng/mL. Plasma NGAL was most elevated 1 week postoperatively (218 +/- 95.5 ng/mL), and stabilized after 1 month (122.9 +/- 45.3 ng/mL). Preoperative plasma NGAL was not correlated with donor age or preoperative estimated glomerular filtration rates (eGFR), but was negatively correlated with 6-month eGFR (r = -0.458,
During the observation period, plasma NGAL at 1 week was most correlated with 6-month eGFR ($r = -0.554, P < .001$). An ROC curve analysis showed that age, preoperative eGFR, and 1-week postoperative plasma NGAL were highly predictive of developing of chronic kidney disease (CKD), defined as eGFR <60 mL/min/1.73 m(2), 6 months postoperatively (AUC = 0.91, $P < .001$). One-week postoperative plasma NGAL was also independently associated with CKD risk at 6 months (odds ratio: 1.13 for each 10 ng/mL increase, $P = .013$).

CONCLUSION: Plasma NGAL becomes elevated after kidney donation and can provide information about acute kidney injury during the compensatory hyperfiltration period. Donors with increased perioperative plasma NGAL require close observation because their possibility of developing CKD after donation may be greater.

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Kortram K; Spoon EQ; Ismail SY; d'Ancona FC; Christiaans MH; van Heurn LW; Hofker HS; Hoksbergen AW; Homan van der Heide JJ; Idu MM; Looman CW; Nurmohamed SA; Ringers J; Toorop RJ; van de Wetering J; Ijzermans JN; Dor FJ.

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BMJ Open. 6(4):e010594, 2016 Apr 01.
[Journal Article. Multicenter Study. Research Support, Non-U.S. Gov't]
UI: 27036141

INTRODUCTION: Informed consent is mandatory for all (surgical) procedures, but it is even more important when it comes to living kidney donors undergoing surgery for the benefit of others. Donor education, leading to informed consent, needs to be carried out according to certain standards. Informed consent procedures for live donor nephrectomy vary per centre, and even per individual healthcare professional. The basis for a standardised, uniform surgical informed consent procedure for live donor nephrectomy can be created by assessing what information donors need to hear to prepare them for the operation and convalescence.

METHODS AND ANALYSIS: The PRINCE (Process of Informed Consent Evaluation) project is a prospective, multicentre cohort study, to be carried out in all eight Dutch kidney transplant centres. Donor knowledge of the procedure and postoperative course will be evaluated by means of pop quizzes. A baseline cohort (prior to receiving any information from a member of the transplant team in one of the transplant centres) will be compared with a control group, the members of which receive the pop quiz on the day of admission for donor nephrectomy. Donor satisfaction will be evaluated for all donors who completed the admission pop-quiz. The primary end point is donor knowledge. In addition, those elements that have to be included in the standardised format informed consent procedure will be identified. Secondary end points are donor satisfaction, current informed consent practices in the different centres (eg, how many visits, which personnel, what kind of information is disclosed, in which format, etc) and correlation of donor knowledge with surgeons' estimation thereof.

ETHICS AND DISSEMINATION: Approval for this study was obtained from the medical ethical committee of the Erasmus MC, University Medical Center, Rotterdam, on 18 February 2015. Secondary approval has been obtained from the local ethics committees in six participating centres. Approval in the last centre has been sought.
RESULTS: Outcome will be published in a scientific journal.

TRIAL REGISTRATION NUMBER: NTR5374; Pre-results.

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20160402
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2016

Compensatory Hypertrophy After Living Donor Nephrectomy.
Chen KW; Wu MW; Chen Z; Tai BC; Goh YS; Lata R; Vathsala A; Tiong HY.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 27234720
BACKGROUND: Previous studies have shown that kidney volume enhances the estimation of glomerular filtration rate (eGFR) in kidney donors. This study aimed to describe the phenomenon of compensatory hypertrophy after donor nephrectomy as measured on computerized tomographic (CT) scans.
METHODS: An institutional Domain Specific Review Board (DSRB)-approved study involved approaching kidney donors to have a follow up CT scan from 6 months to 1 year after surgery; 29 patients participated; 55% were female. Clinical chart review was performed, and the patient's remaining kidney volume was measured before and after surgery based on CT scans. eGFR was determined with the use of the Modification of Diet in Renal Disease equation.
RESULTS: Mean parenchymal volume of the remaining kidney for this population (mean age, 44.3 +/- 8.5 y) was 204.7 +/- 82.5 cc before surgery and 250.5 +/- 113.3 cc after donor nephrectomy. Compensatory hypertrophy occurred in 79.3% of patients (n = 23). Mean increase
in remaining kidney volume was 22.4 +/- 23.2% after donor nephrectomy in healthy individuals. Over a median follow-up of 52.9 +/- 19.8 months, mean eGFR was 68.9 +/- 12.4 mL/min/1.73 m(2), with 24.1% of patients (n = 7) in chronic kidney disease grade 3. Absolute and relative change in kidney volume was not associated with sex, race, surgical approach, or background of hypertension (P = NS). There was a trend of decreased hypertrophy with increasing age (P = .5; Spearman correlation, -.012).

CONCLUSIONS: In healthy kidney donors, compensatory hypertrophy of the remaining kidney occurs in 79.3% of the patients, with an average increment of about 22.4%. Older patients may have a blunted compensatory hypertrophy response after surgery.

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20160528

Year of Publication
2016
Access to Transplantation and Transplant Outcome Measures (ATTOM): study protocol of a UK wide, in-depth, prospective cohort analysis.

Oniscu GC; Ravanan R; Wu D; Gibbons A; Li B; Tomson C; Forsythe JL; Bradley C; Cairns J; Dudley C; Watson CJ; Bolton EM; Draper H; Robb M; Bradbury L; Pruthi R; Metcalfe W; Fogarty D; Roderick P; Bradley JA; ATTOM Investigators.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

BMJ Open. 6(2):e010377, 2016 Feb 25.

[Journal Article. Research Support, Non-U.S. Gov't]

UI: 26916695

INTRODUCTION: There is significant intercentre variability in access to renal transplantation in the UK due to poorly understood factors. The overarching aims of this study are to improve equity of access to kidney and kidney-pancreas transplantation across the UK and to optimise organ allocation to maximise the benefit and cost-effectiveness of transplantation.

METHODS AND ANALYSIS: 6844 patients aged 18-75 years starting dialysis and/or receiving a transplant together with matched patients active on the transplant list from all 72 UK renal units were recruited between November 2011 and March 2013 and will be followed for at least 3 years. The outcomes of interest include patient survival, access to the transplant list, receipt of a transplant, patient-reported outcome measures (PROMs) including quality of life, treatment satisfaction, well-being and health status on different forms of renal replacement therapy. Sociodemographic and clinical data were prospectively collected from case notes and from interviews with patients and local clinical teams. Qualitative process exploration with clinical staff will help identify unit-specific factors that influence access to renal transplantation. A health economic analysis will explore costs and outcomes associated with alternative approaches to organ allocation. The study will deliver: (1) an understanding of patient and unit-specific factors influencing access to renal transplantation in the UK, informing potential changes to practices and policies to optimise outcomes and reduce intercentre variability; (2) a patient-survival probability model to standardise access to the renal transplant list and (3) an understanding of PROMs and health economic impact of kidney and kidney-pancreas transplantation to inform the development of a more sophisticated and fairer organ allocation algorithm.

ETHICS AND DISSEMINATION: The protocol has been independently peer reviewed by National Institute for Health Research (NIHR) and approved by the East of England Research Ethics Committee. The results will be published in peer-reviewed journals and presented at conferences.

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Oniscu, Gabriel C; Ravanan, Rommel; Wu, Diana; Gibbons, Andrea; Li, Bernadette; Tomson, Charles; Forsythe, John L; Bradley, Clare; Cairns, John; Dudley, Christopher; Watson, Christopher J E; Bolton, Eleanor M; Draper, Heather; Robb, Matthew; Bradbury, Lisa; Pruthi, Rishi; Metcalfe, Wendy; Fogarty, Damian; Roderick, Paul; Bradley, J Andrew; ATTOM Investigators.
Institution
210.
Hand-assisted Laparoscopic Nephrectomy in Living-donor Kidneys With Multiple Arteries: Experience of a Transplant Center.
Bandin Musa AR; Montes de Oca J.
[Journal Article]
UI: 27015532
OBJECTIVES: Hand-assisted laparoscopic nephrectomy is a relatively new procedure in our country. This article reports on one of the largest number of this procedure in kidneys with multiple vessels.
MATERIALS AND METHODS: We reviewed all cases of hand-assisted laparoscopic nephrectomy from July 2002 to February 2009. Results were then descriptive, with statistical analyses performed with SPSS software (SPSS: An IBM Company, version 10.0, IBM Corporation, Armonk, NY, USA).
RESULTS: From July 2002 to February 2009, 165 patients had hand-assisted laparoscopic nephrectomy, with 96.9% being the left kidney. We found a prevalence of 18.7% (n = 31) of kidneys with multiple arteries, with 8 of these having multiple principal arteries, 9 with superior polar artery, and 14 with inferior polar artery. Twenty-nine donors (17.57%) presented with more than 1 principal vein. Warm ischemia was longer in kidneys with multiple arteries (4.16 vs 3.96 min); recipient renal function (evaluated by creatinine levels at day 5 after transplant) was 1.63 mg/dL in kidneys with single artery versus 1.27 mg/dL in kidneys with multiple arteries. There were no significant differences for time of surgery, bleeding, and discharge of the donor.
CONCLUSIONS: We found no differences in kidney function between single and multiple artery kidneys, resulting in the conclusion that hand-assisted laparoscopic nephrectomy offers an effective option for kidney donors, including those with multiple arteries.

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20160326

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2016

211.

3.0 Tesla magnetic resonance angiography (MRA) for comprehensive renal evaluation of living renal donors: pilot study with computerized tomography angiography (CTA) comparison.

Gulati M; Dermendjian H; Gomez AM; Tan N; Margolis DJ; Lu DS; Gritsch HA; Raman SS.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Clinical Trial. Comparative Study. Journal Article]
UI: 27133670

PURPOSE: Most living related donor (LRD) kidneys are harvested laparoscopically. Renal vascular anatomy helps determine donor suitability for laparoscopic nephrectomy. Computed tomography angiography (CTA) is the current gold standard for preoperative imaging; magnetic resonance angiography (MRA) offers advantages including lack of ionizing radiation and lower incidence of contrast reactions. We evaluated 3.0T MRA for assessing renal anatomy of LRDs.

MATERIALS AND METHODS: Thirty consecutive LRDs underwent CTA followed by 3.0T MRA. Data points included number and branching of vessels, incidental findings, and urothelial opacification. Studies were individually evaluated by three readers blinded to patient data.
Studies were reevaluated in consensus with discrepancies revealed, and final consensus results were labeled "truth".

RESULTS: Compared with consensus "truth", both computed tomography (CT) and magnetic resonance imaging were highly accurate for assessment of arterial and venous anatomy, although CT was superior for detection of late venous confluence as well as detection of renal stones. Both modalities were comparable in opacification of lower ureters and bladder; MRA underperformed CTA for opacification of upper urinary tracts.

CONCLUSIONS: 3.0T MRA enabled excellent detection of comprehensive renal anatomy compared to CTA in LRDs.

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Access ligation in transplant patients. [Review]
Wilmink T; Hollingworth L; Dasgupta I.
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MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Review]
UI: 26951908
Access surgeons will encounter patients with functioning transplants who want to lose their fistula, and every dialysis unit sees patients returning after a failed kidney transplant for whom an old fistula is a readily available lifeline. The decision is straightforward in patients with perfectly functioning transplants and disabling complications of their fistula, or in patients with failing transplants and a good fistula. The challenge is to make this decision in patients with good transplant function and an asymptomatic fistula. Despite improvements in one-year survival of renal grafts, the long-term graft survival has improved modestly. This means about half of the patients with a successful kidney transplant will return to dialysis within 10 years. Use of recently developed risk calculators, based on clinical parameters, may help in the decision process. A high flow fistula can lead to heart failure but most fistulae are well tolerated in asymptomatic patients and the effects of closure of the AVF on the heart are modest. Recent evidence suggests that there may be benefits of a functioning AVF that may need to be considered in this decision process. This article reviews the literature and comes to pragmatic recommendations of what to do with this conundrum.

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Date Created
INTRODUCTION: Donation after cardiac death (DCD) began in 2011 after the program hosted by the First Affiliated Hospital of Sun Yat-sen University in China. The aim of this study is to report on our experience regarding the method of preserving donated kidneys for DCD kidney transplantation.

MATERIAL AND METHODS: A total of 37 donors and 73 primary kidney transplant recipients during the period 2011-2014 in the Urology Center of the First Hospital of Jilin University were enrolled in the study. Recipients were assigned to traditional static cold storage (SCS) group and hypothermic machine perfusion (HMP) group based on the preservation environment of donated kidneys after organ harvest. Clinical data were collected for each group.

RESULT: The HMP group had a lower rate of delayed graft function (DGF), better postoperative recovery and kidney function compared with that of SCS group. There is no significant difference in postoperative rejection incidence between the 2 groups.

CONCLUSIONS: DCD kidneys stored by hypothermic machine contribute to a lower rate of DGF and promoted the rehabilitation progress.

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Some living kidney donors (LKDs) incur costs associated with donation, although these costs are not well characterized in the United States. We collected cost data in the 12 mo following donation from 182 LKDs participating in the multicenter prospective Kidney Donor Outcomes Cohort (KDOC) Study. Most LKDs (n=167, 92%) had one direct cost or more following donation, including ground transportation (86%), health care (41%), meals (53%), medications (36%), lodging (23%), and air transportation (12%). LKDs missed 33072 total work hours, 40% of which were unpaid and led to $302175 in lost wages (mean $1660). Caregivers lost $68655 in wages (mean $377). Although some donors received financial assistance, 89% had a net financial loss in the 12-mo period, with one-third (33%) reporting a loss exceeding $2500. Financial burden was higher for those with greater travel distance to the transplant center (Spearman's p=0.26, p<0.001), lower household income (Spearman's p=-0.25, p<0.001), and more unpaid work hours missed (Spearman's p=0.52, p<0.001). Achieving financial neutrality for LKDs must be an immediate priority for the transplant community, governmental agencies, insurance companies, nonprofit organizations, and society at large.

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MEDLINE
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Comments
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2016
Outcome of Kidney Transplantation From Living Donors With Multiple Renal Arteries Versus Single Renal Artery.
Taghizadeh Afshari A; Mohammadi Fallah MR; Alizadeh M; Makhdoomi K; Rahimi E; Vossoghian S.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Comparative Study. Journal Article]
UI: 26921750
INTRODUCTION: Receiving a kidney transplant from donors with multiple renal arteries (MRAs) is suggested to be associated with higher risk of vascular and urologic complications and poor allograft outcomes compared to the donors with single renal artery (SRA). We evaluated survival rates in the recipients from donors with MRAs compared to those from donors with SRA.
MATERIALS AND METHODS: In a retrospective study on 115 kidney allograft recipients, demographic characteristics and the outcomes of kidney transplantation were compared between the recipients from donors with MRAs compared to those from donors with SRA. These included acute tubular necrosis, acute allograft rejection, hypertension, vascular complications, urologic complications, kidney function indicators, and allograft survival at 1 year.
RESULTS: There was no significant difference in the recipients' age, sex distribution, and weight, donors' age, donor-recipient familial relation, urologic complications, and duration of hospitalization between the two groups. However, MRA was significantly associated with a higher likelihood of right-side kidney donation, longer warm and cold ischemia times, and lower glomerular filtration rate and higher serum creatinine concentrations at discharge and 12 months after transplantation, as compared to SRA transplants. No significant difference was seen in late complications including hypertension and renal artery stenosis. One-year graft survival was slightly poorer in the MRA group than the SRA group.
CONCLUSIONS: Our results demonstrate that kidney allografts with MRAs are associated with risks but have acceptable outcomes during the 1st year after transplantation, as compared to SRA kidney allografts.
OBJECTIVE: We compared the personality of kidney donor candidates to non-donor controls and analyzed the personality profile of candidates psychosocially at risk. METHODS: 49 consecutive living kidney donor candidates underwent an extensive psychosocial evaluation. Psychosocial risk factors concerning knowledge of donation risks (1), donor-recipient-relationship (2), and/or mental health (3) were rated on a 3-point rating scale (0=high risk, 2=no risk). Furthermore, candidates as well as 49 age-and gender-matched non-donor controls filled in questionnaires concerning psychological distress (Symptom Checklist 90-R) and personality (Temperament and Character Inventory). RESULTS: There were no significant differences between candidates and controls concerning psychological distress or personality. Psychosocial assessment identified 13 candidates (26.5%) with increased psychosocial risk. This group displayed compared to candidates without psychosocial risk no difference concerning age, gender, formal education, donor-recipient relationship and psychological distress. However, this group scored significantly higher on reward dependence compared to suitable donors and controls (p<0.05). Reward dependence was associated with a lack of adequate knowledge on donation (r=-0.35, p<0.05).
CONCLUSION: Reward dependence has important implications for decision-making, because it is associated with an increased tendency to deny potential risks of donation. Careful identification and assessment of reward dependent donor candidates is needed to ensure a free-willed decision.

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20160420

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217.
The pros and cons of preserving a functioning arteriovenous fistula after kidney transplantation.

[Review]
Voorzaat BM; van Schaik J; Siebelink HM; Tordoir JH; Rotmans JI.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Review]
UI: 26951898
The autologous arteriovenous fistula (AVF) for hemodialysis burdens the cardiovascular system with increased cardiac output and pulmonary artery pressure, increasing cardiovascular risk. This article reviews literature on the benefits and drawbacks of a functioning AVF after kidney transplantation and discusses the cardiovascular effects of AVF closure. Several cohort studies demonstrate a significant cardiac burden of an AVF and improvement of cardiac dimensions after AVF ligation. However, no randomized trials have been conducted on routine AVF closure after successful kidney transplantation. Therefore, clinical trials are warranted to evaluate whether the cardiovascular benefits of routine AVF closure outweigh the potential harm for patients after successful kidney transplantation.

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2016
Investigating kidney donation as a risk factor for hypertension and microalbuminuria: findings from the Swiss prospective follow-up of living kidney donors.

Thiel GT; Nolte C; Tsinalis D; Steiger J; Bachmann LM.

OBJECTIVES: To assess the role of nephrectomy as a risk factor for the development of hypertension and microalbuminuria.

DESIGN: Prospective, long-term follow-up study.

SETTING: Swiss Organ Living-Donor Health Registry.

PARTICIPANTS: All living kidney donors in Switzerland between 1993 and 2009.

INTERVENTIONS: Data on health status and renal function before 1 year and biennially after donation were collected.

PRIMARY AND SECONDARY OUTCOME MEASURES: Comparison of 1-year and 5-year occurrences of hypertension among normotensive donors with 1-year and 5-year estimates from the Framingham hypertension risk score. Multivariate random intercept models were used to investigate changes of albumin excretion after donation, correcting for repeated measurements and cofactors such as age, male gender and body mass index.

RESULTS: A total of 1214 donors contributed 3918 data entries with a completed biennial follow-up rate of 74% during a 10-year period. Mean (SD) follow-up of donors was 31.6 months (34.4). Median age at donation was 50.5 years (IQR 42.2-58.8); 806 donors (66.4%) were women. Donation increased the risk of hypertension after 1 year by 3.64 (95% CI 3.52 to 3.76; p<0.001). Those participants remaining normotensive 1 year after donation return to a risk similar to that of the healthy Framingham population. Microalbuminuria before donation was dependent on donor age but not on the presence of hypertension. After nephrectomy, hypertension became the main driver for changes in albumin excretion (OR 1.19; 95% CI 0.13 to 2.25; p=0.03) and donor age had no effect.

CONCLUSIONS: Nephrectomy propagates hypertension and increases susceptibility for the development of hypertension-induced microalbuminuria.

Lafranca JA; van Bruggen M; Kimenai HJ; Tran TC; Terkivatan T; Betjes MG; IJzermans JN; Dor FJ.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]

UI: 27077904
BACKGROUND: Whether vascular multiplicity should be considered as contraindication and therefore 'extended donor criterion' is still under debate.

METHODS: Data from all live kidney donors from 2006-2013 (n = 951) was retrospectively reviewed. Vascular anatomy as imaged by MRA, CTA or other modalities was compared with intraoperative findings. Furthermore, the influence of vascular multiplicity on outcome of donors and recipients was studied.

RESULTS: In 237 out of 951 donors (25%), vascular multiplicity was present. CTA had the highest accuracy levels regarding vascular anatomy assessment. Regarding outcome of donors with vascular multiplicity, warm ischemia time (WIT) and skin-to-skin time were significantly longer if arterial multiplicity (AM) was present (5.1 vs. 4.0 mins and 202 vs. 178 mins). Skin-to-skin time was significantly longer, and complication rates were higher in donors with venous multiplicity (203 vs. 180 mins and 17.2% vs. 8.4%). Outcome of renal transplant recipients showed a significantly increased WIT (30 vs. 26.7 minutes), higher rate of DGF (13.9% vs. 6.9%) and lower rate of BPAR (6.9% vs. 13.9%) in patients receiving a kidney with AM compared to kidneys with singular anatomy.

CONCLUSIONS: We conclude that vascular multiplicity should not be a contra-indication, since it has little impact on clinical outcome in the donor as well as in renal transplant recipients.

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BACKGROUND: Renal ischemia-reperfusion injury (IRI) is a major cause of kidney damage after e.g. renal surgery and transplantation. Ischemic postconditioning (IPoC) is a promising treatment strategy for renal IRI, but early clinical trials have not yet replicated the promising results found in animal studies.

METHOD: We present a systematic review, quality assessment and meta-analysis of the preclinical evidence for renal IPoC, and identify factors which modify its efficacy.

RESULTS: We identified 39 publications studying >250 control animals undergoing renal IRI only and >290 animals undergoing renal IRI and IPoC. Healthy, male rats undergoing warm ischemia were used in the vast majority of studies. Four studies applied remote IPoC, all others used local IPoC. Meta-analysis showed that both local and remote IPoC ameliorated renal damage after IRI for the outcome measures serum creatinine, blood urea nitrogen and renal histology. Subgroup analysis indicated that IPoC efficacy increased with the duration of index ischemia. Measures to reduce bias were insufficiently reported.
CONCLUSION: High efficacy of IPoC is observed in animal models, but factors pertaining to the internal and external validity of these studies may hamper the translation of IPoC to the clinical setting. The external validity of future animal studies should be increased by including females, comorbid animals, and transplantation models, in order to better inform clinical trial design. The severity of renal damage should be taken into account in the design and analysis of future clinical trials.

Status
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221.
Prevalence of IgA Antibodies to beta2-Glycoprotein I: A Population-Dependent Feature?.
Visentin J; Ramaharo D; Ryman A; Contin-Bordes C; Merville P.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Cardiovascular Effects of Unilateral Nephrectomy in Living Kidney Donors.
Moody WE; Ferro CJ; Edwards NC; Chue CD; Lin EL; Taylor RJ; Cockwell P; Steeds RP; Townend JN; CRIB-Donor Study Investigators.

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[Journal Article. Multicenter Study. Randomized Controlled Trial. Research Support, Non-U.S. Gov't]
UI: 26754643

UNLABELLED: There is a robust inverse graded association between glomerular filtration rate (GFR) and cardiovascular risk, but proof of causality is lacking. Emerging data suggest living kidney donation may be associated with increased cardiovascular mortality although the mechanisms are unclear. We hypothesized that the reduction in GFR in living kidney donors is associated with increased left ventricular mass, impaired left ventricular function, and increased aortic stiffness. This was a multicenter, parallel group, blinded end point study of living kidney
donors and healthy controls (n=124), conducted from March 2011 to August 2014. The primary outcome was a change in left ventricular mass assessed by magnetic resonance imaging (baseline to 12 months). At 12 months, the decrease in isotopic GFR in donors was -30+/−12 mL/min/1.73m(2). In donors compared with controls, there were significant increases in left ventricular mass (+7+/−10 versus -3+/−8 g; P<0.001) and mass:volume ratio (+0.06+/−0.12 versus -0.01+/−0.09 g/mL; P<0.01), whereas aortic distensibility (-0.29+/−1.38 versus +0.28+/−0.79x10(-3) mm Hg(-1); P=0.03) and global circumferential strain decreased (-1.1+/−3.8 versus +0.4+/−2.4%; P=0.04). Donors had greater risks of developing detectable highly sensitive troponin T (odds ratio, 16.2 [95% confidence interval, 2.6-100.1]; P<0.01) and microalbuminuria (odds ratio, 3.8 [95% confidence interval, 1.1-12.8]; P=0.04). Serum uric acid, parathyroid hormone, fibroblast growth factor-23, and high-sensitivity C-reactive protein all increased significantly. There were no changes in ambulatory blood pressure. Change in GFR was independently associated with change in left ventricular mass (R(2)=0.28; P=0.01). These findings suggest that reduced GFR should be regarded as an independent causative cardiovascular risk factor.


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Status
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Advances in treatment strategies for ischemia reperfusion injury. [Review]
INTRODUCTION: Ischemia-reperfusion injury (IRI) involves a complex sequence of events and limits the outcome of various surgical interventions. Clinical trials, based on the data of experimental models, aim to prove whether a pharmacological or technical approach could be suitable to provide a beneficial effect in humans. Due to the complexity of IRI, few pharmacological treatments have been investigated in clinical Phase III.

AREAS COVERED: In this review we report clinical trials that test specific drugs in clinical trials of organ transplantation. These studies form part of Phase II trials and examine the administration of caspase inhibitors, P-selectin antagonist or an antioxidant component in order to attenuate cold IRI during transplantation. Moreover, we provide a brief description of drugs tested on trials of different clinical situations associated to IRI, such as the coronary artery bypass graft surgery and percutaneous coronary intervention.

EXPERT OPINION: Future clinical trials could be centered on the application of techniques suitable for organs with increased vulnerability toward IRI. Furthermore, the standardization of reliable biomarkers and a careful estimation of the impact of high risk factors may be the key in order to achieve a more critical evaluation of the obtained results.

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Date Created
BACKGROUND: Urinary calprotectin has been identified as a promising biomarker for acute kidney injury. To date, however, the time-dependent changes of this parameter during acute kidney injury remain elusive. The aim of the present work was to define the time-course of urinary calprotectin secretion after ischaemia/reperfusion-induced kidney injury in comparison to neutrophil gelatinase-associated lipocalin, thereby monitoring the extent of tubular damage in nephron sparing surgery for kidney tumours.

METHODS: The study population consisted of 42 patients. Thirty-two patients underwent either open or endoscopic nephron sparing surgery for kidney tumours. During the surgery, the renal arterial pedicle was clamped with a median ischaemic time of 13 minutes (interquartile range, 4.5-20.3 minutes) in 26 patients. Ten retro-peritoneoscopic living donor nephrectomy patients and 6 nephron sparing surgery patients in whom the renal artery was not clamped served as controls. Urinary calprotectin and neutrophil gelatinase-associated lipocalin concentrations were repeatedly measured by enzyme-linked immunosorbent assay and assessed according to renal function parameters.

RESULTS: Urinary concentrations of calprotectin and neutrophil gelatinase-associated lipocalin increased significantly after ischaemia/reperfusion injury, whereas concentrations remained unchanged after nephron sparing surgery without ischaemia/reperfusion injury and after kidney donation. Calprotectin and neutrophil gelatinase-associated lipocalin levels were significantly increased 2 and 8 hours, respectively, post-ischaemia. Both proteins reached maximal concentrations after 48 hours, followed by a subsequent persistent decrease. Maximal neutrophil
gelatinase-associated lipocalin and calprotectin concentrations were 9-fold and 69-fold higher than their respective baseline values. The glomerular filtration rate was only transiently impaired at the first post-operative day after ischaemia/reperfusion injury \((p = 0.049)\).

CONCLUSION: Calprotectin and neutrophil gelatinase-associated lipocalin can be used to monitor clinical and sub-clinical tubular damage after nephron sparing surgery for kidney tumours. Urinary calprotectin concentrations start rising within 2 hours after ischaemia/reperfusion-induced kidney injury.

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[Journal Article. Research Support, Non-U.S. Gov't]
UI: 26734715

INTRODUCTION: Delayed graft function is a prevalent clinical problem in renal transplantation for which there is no objective system to predict occurrence in advance. It can result in a significant increase in the necessity for hospitalisation post-transplant and is a significant risk factor for other post-transplant complications.

METHODOLOGY: The importance of microRNAs (miRNAs), a specific subclass of small RNA, have been clearly demonstrated to influence many pathways in health and disease. To investigate the influence of miRNAs on renal allograft performance post-transplant, the expression of a panel of miRNAs in pre-transplant renal biopsies was measured using qPCR. Expression was then related to clinical parameters and outcomes in two independent renal transplant cohorts.

RESULTS: Here we demonstrate, in two independent cohorts of pre-implantation human renal allograft biopsies, that a novel pre-transplant renal performance scoring system (GRPSS), can determine the occurrence of DGF with a high sensitivity (>90%) and specificity (>60%) for donor...
allografts pre-transplant, using just three senescence associated microRNAs combined with
donor age and type of organ donation.

CONCLUSION: These results demonstrate a relationship between pre-transplant microRNA
expression levels, cellular biological ageing pathways and clinical outcomes for renal
transplantation. They provide for a simple, rapid quantitative molecular pre-transplant assay to
determine post-transplant allograft function and scope for future intervention. Furthermore, these
results demonstrate the involvement of senescence pathways in ischaemic injury during the
organ transplantation process and an indication of accelerated bio-ageing as a consequence of
both warm and cold ischaemia.

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Moving closer to understanding the risks of living kidney donation.

Steiner RW.

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[Journal Article]

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Recent studies from the United States and Norway have suggested an unexpected 8- to 11-fold relative risk of ESRD after kidney donation, but a low long-term absolute risk. Abundant renal epidemiologic data predict that these studies have underestimated long-term risk. The 1% lifetime post-donation risk in the US study requires medical screening to predict ESRD in 96 of 100 candidates. This is particularly unlikely in the 30-35% of candidates under age 35, half of whose lifetime ESRD will occur after age 64. Many experts have attributed the increased relative risks in these studies to loss of GFR at donation, which ultimately means that high-normal pre-donation GFRs will reduce absolute post-donation risks. The 8- to 11-fold relative risks predict implausible risks of uninephrectomy in the general population, but lower estimates still result in very high risks for black donors. Young vs. older age, low vs. high-normal pre-donation GFRs, black race, and an increased relative risk of donation all predict highly variable individual risks, not a single "low" or "1%" risk as these studies suggest. A uniform, ethically defensible donor selection protocol would accept older donors with many minor medical abnormalities but protect from donation many currently acceptable younger, black, and/or low GFR candidates.

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Lesson From the New York City Out-of-Hospital Uncontrolled Donation After Circulatory Determination of Death Program.

Wall SP; Kaufman BJ; Williams N; Norman EM; Gilbert AJ; Munjal KG; Maikhor S; Goldstein MJ; Rivera JE; Lerner H; Meyers C; Machado M; Montella S; Pressman M; Teperman LW; Dubler NN; Goldfrank LR; NYC uDCDD Study Group.

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STUDY OBJECTIVE: In 2006, the Institute of Medicine emphasized substantial potential to expand organ donation opportunities through uncontrolled donation after circulatory determination of death (uDCDD). We pilot an out-of-hospital uDCD kidney program for New York City in partnership with communities that it was intended to benefit. We evaluate protocol process and outcomes while identifying barriers to success and means for improvement.

METHODS: We conducted a prospective, participatory action research study in Manhattan from December 2010 to May 2011. Daily from 4 to 12 pm, our organ preservation unit monitored emergency medical services (EMS) frequencies for cardiac arrests occurring in private locations. After EMS providers independently ordered termination of resuscitation, organ preservation unit staff determined clinical eligibility and donor status. Authorized parties, persons authorized to make organ donation decisions, were approached about in vivo preservation. The study population included organ preservation unit staff, authorized parties, passersby, and other New York City agency personnel. Organ preservation unit staff independently documented shift activities with daily operations notes and teleconference summaries that we analyzed with mixed qualitative and quantitative methods.

RESULTS: The organ preservation unit entered 9 private locations; all the deceased lacked previous registration, although 4 met clinical screening eligibility. No kidneys were recovered. We collected 837 notes from 35 organ preservation unit staff. Despite frequently recounting protocol breaches, most responses from passersby including New York City agencies were favorable. No authorized parties were offended by preservation requests, yielding a Bayesian posterior median 98% (95% credible interval 76% to 100%).
CONCLUSION: In summary, the New York City out-of-hospital uDCDD program was not feasible. There were frequent protocol breaches and confusion in determining clinical eligibility. In the small sample of authorized persons we encountered during the immediate grieving period, negative reactions were infrequent.

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BACKGROUND: Observation versus ligation of a functional arteriovenous fistula (AVF) after successful renal transplantation (SRT) has been a controversial topic of debate. Congestive heart failure and pulmonary hypertension are common in dialysis patients, and more frequent when vascular access flow is excessive. Renal transplant failure may occur in up to 34% of patients after 5 years, therefore maintaining a moderate flow AVF appears warranted. We review SRT patients with high flow-AVFs (HF-AVF) and clinical signs of heart failure where a modified precision banding procedure was used for access flow reduction.

METHODS: Patients referred for HF-AVF evaluation after SRT were identified and records reviewed retrospectively. In addition to recording clinical signs of heart failure, each patient had ultrasound AVF flow measurement before and after temporary AVF occlusion of the access by digital compression. Pulse rate and the presence or absence of a cardiac murmur was noted before and after AVF compression. Adequacy of access flow restriction was evaluated
intraoperatively using ultrasound flow measurements, adjusting the banding diameter in 0.5 mm increments to achieve the targeted AVF flow.

RESULTS: Twelve patients were evaluated over a 19-month period. Eight (66%) were male and one (8%) obese. Ages were 15-73 years (mean = 42). The AVFs were established 24-86 months previously. The mean pulse rate declined after AVF compression from 90/min to 72/min (range 110-78). Six patients had a precompression cardiac flow murmur that disappeared with temporary AVF compression. One patient with poor cardiac function underwent immediate AVF ligation with dramatic improvement in cardiac status. All other patients underwent a precision banding procedure with real-time flow monitoring. Mean access flow was 2,280 mL/min (1,148-3,320 mL/min) before access banding and was 598 mL/min (481-876) after flow reduction. The clinical signs of heart failure disappeared in all patients. All AVFs remained patent although one individual later requested ligation for cosmesis. Two patients had renal transplant failure and later successfully used the AVF. Follow-up postbanding was 1-18 months (mean = 12).

CONCLUSIONS: Patients with successful renal transplants and HF-AVFs had resolution of heart failure findings and maintenance of access patency using a modified precision banding procedure. Flow reduction in symptomatic renal transplant patients with elevated access flow is recommended. Further study is warranted to substantiate these recommendations and clarify the appropriate thresholds for such interventions.

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OBJECTIVE: To determine the incidence of adrenal incidentalomas (AIs) in a single-center series of living renal donors, to describe an evaluation algorithm for AIs in this patient population, and to compare the complication rates of hand-assisted laparoscopic donor nephrectomy (HALDN) with those of combined HALDN and adrenalectomy.

METHODS: We performed a single-center, retrospective study of consecutive living kidney donors who underwent laparoscopic nephrectomy for transplantation, with or without simultaneous ipsilateral adrenalectomy, between January 2008 and September 2014.

RESULTS: During the study period, AIs were detected in 18 of 1033 potential living renal donors who underwent computerized tomographic angiography. Application of additional donor selection criteria and of an adrenal mass assessment algorithm resulted in 849 HALDN, of which 13 were combined with simultaneous adrenalectomy. The hospital length of stay (2.4 vs 2.6 days), perioperative (0.025 vs 0.077), early (0.073 vs 0.077), and late (0.014 vs 0.077) postoperative complication rates, and conversion to open donor nephrectomy (0.008 vs 0.00) were not significantly different. Mean operative time was significantly longer in the adrenalectomy group. None of the adrenal masses were malignant.

CONCLUSION: Here, we presented our algorithm to manage the living kidney donors with AIs. Although donor population with AIs was relatively small in number, simultaneous adrenalectomy and ipsilateral nephrectomy seemed to be technically safe and conferred no identifiable increased risk of malignancy for the kidney transplant donor, when the incidentaloma is nonfunctional and less than or equal to 4 cm as assessed by preoperative imaging.

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230.
The Irish living kidney donor program - why potential donors do not proceed to live kidney donation?
Connaughton DM; Harmon G; Cooney A; Williams Y; O'Regan J; O'Neill D; Cunningham P; Counihan A; O'Kelly P; McHale S; Denton M; O'Seaghdha CM; Magee C; Conlon P; Little D; Keogan M; de Freitas DG.
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BACKGROUND: Living donation is not only a method to increase access to kidney transplantation but can also offer superior outcomes. We report the experience of the living donor
(LD) program in the Republic of Ireland and explore reasons why potential donors do not proceed to live donation.

METHODS: Retrospective cohort study of all potential donors from January 2000 to March 2014 who presented wishing to undergo donor work-up and their subsequent outcomes.

RESULTS: A total of 956 donors for 496 recipients contacted the live kidney donation program of which 883 potential donors proceeded to the initial stage of assessment. The donor dropout rate at this stage was 64.2% (614/956 potential donors did not proceed to further evaluation). Thereafter, 269 (28.1%) donors underwent further assessment by the multidisciplinary team. In total, 93 (9.7%) donors were declined following this assessment with 176 (18.4%) donors ultimately proceeding to live kidney donation. The major reason for declining a donor was a medical contraindication (n = 63, 67.7%). In term of recipients, 54.2% (n = 269/496) had a potential donor proceed for further assessment of which 65.4% (n = 176/269) ultimately proceeding to live donation.

CONCLUSION: Further evaluation of the declined donor group is warranted to allow for expansion of the LD program.

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231.
Long-Term Outcomes of Intestinal and Multivisceral Transplantation at a Single Center in
Argentina.
Ramisch D., Rumbo C., Echevarria C., Moulin L., Niveyro S., Orce G., Crivelli A., Martinez M.I.,
Embase
Transplantation Proceedings. 48 (2) (pp 457-462), 2016. Date of Publication: 01 Mar 2016.
[Article]
AN: 610108339
Background Intestinal failure (IF) patients received parenteral nutrition (PN) as the only available therapy until intestinal transplantation (ITx) evolved as an accepted treatment. The aim of this article is to report the long-term outcomes of a series of ITx performed in pediatric and adult patients at a single center 9 years after its creation. Patients and Methods This is a retrospective analysis of the ITx performed between May 2006 and January 2015. Diagnoses, pre-ITx mean time on PN, indications for ITx, time on the waiting list for types of ITx, mean total ischemia time, and warm ischemia time, time until PN discontinuation, incidence of acute and chronic rejection, and 5-year actuarial patient survival are reported. Results A total of 42 patients received ITx; 80% had short gut syndrome (SG); the mean time on PN was 1620 days. The main indication for ITx was lack of central venous access followed by intestinal failure-associated liver disease (IFALD) and catheter-related infectious complications. The mean time on the waiting list was 188 days (standard deviation, +/-183 days). ITx were performed in 26 children and 14 adults. In all, 32 procedures were isolated ITx (IITx); 10 were multiorgan Tx (MOT; 3 combined, 7 multivisceral Tx (MVTx), 1 modified MVTx and 2 with kidney); 2 (4.7 %) were retransplantations: 1 IITx, 1 MVTx, and 5 including the right colon. Thirteen patients (31%) received abdominal rectus fascia. All procedures were performed by the same surgical team. Total ischemia time was 7:53 +/- 2:04 hours, and warm ischemia time was 40.2 +/- 10.5 minutes. The mean length of implanted intestine was 325 +/- 63 cm. Bishop-Koop ileostomy was performed in 67% of cases. In all, 16 of 42 Tx required early reoperations. The overall mean follow-up time was 41 +/- 35.6 months. The mean time to PN discontinuation after Tx was 68 days (P =.001). The total number of acute cellular rejection (ACR) episodes until the last follow-up was 83; the total number of grafts lost due to ACR was 4; and the total graft lost due to chronic rejection was 3. At the time of writing, the overall 5-year patient survival is 55% (65% for IITx vs 22% for MOT; P =.0001); 60% for pediatric recipients vs 47% for adults (P = NS); 64% when the indication for ITx was SG vs 25% for non-SG (P =.002). Conclusions At this center, candidates with SG, in the absence of IFALD requiring IITx, showed the best long-term outcomes, independent of recipient age. A multidisciplinary approach is mandatory for the care of intestinal failure patients, to sustain a rehabilitation and transplantation program over time.

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Status EMBASE

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Combined predictive value of the expanded donor criteria for long-term graft survival of kidneys from donors after cardiac death: A single-center experience over three decades.

Embase
International Journal of Urology. 23 (4) (pp 319-324), 2016. Date of Publication: 01 Apr 2016.
[Article]
AN: 608400152

Objectives: Kidneys procured from the deceased hold great potential for expanding the donor pool. The aims of the present study were to investigate the post-transplant outcomes of renal allografts recovered from donors after cardiac death, to identify risk factors affecting the renal prognosis and to compare the long-term survival from donors after cardiac death according to the number of risk factors shown by expanded criteria donors. Methods: A total of 443 grafts recovered using an in situ regional cooling technique from 1983 to 2011 were assessed. To assess the combined predictive value of the significant expanded criteria donor risk criteria, the patients were divided into three groups: those with no expanded criteria donor risk factors (no risk), one expanded criteria donor risk factor (single-risk) and two or more expanded criteria donor risk factors (multiple-risk). Results: Among the donor factors, age >=50 years, hypertension, maximum serum creatinine level >=1.5 mg/dL and a warm ischemia time >=30 min were identified as independent predictors of long-term graft failure on multivariate analysis.
Regarding the expanded criteria donors criteria for marginal donors, cerebrovascular disease, hypertension and maximum serum creatinine level \(\geq 1.5\) mg/dL were identified as significant predictors on univariate analysis. The single- and multiple-risk groups showed 2.01- and 2.40-fold higher risks of graft loss, respectively. Conclusions: Renal grafts recovered from donors after cardiac death donors have a good renal function with an excellent long-term graft survival. However, an increased number of expanded criteria donors risk factors increase the risk of graft loss.

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233.
Advances in ureteral stent development.
Chew B.H., Lange D.
Embase
Purpose of review: Ureteral stents are commonly used in urology, but there is no perfect ureteral stent. This review documents developing ureteral technologies and strategies over the past 2 years. This area has some progressive advances in the foreseeable future. Recent findings publications from 2014 and 2015 from a PubMed search with the words ‘ureter’ and ‘stent’ in the title were reviewed. Topics that affected patient symptoms from stents include selecting the proper length of stent, patient education regarding stent symptoms, and how the stent is removed. Stent extraction strings have been studied and not increased the incidence of infection or pain. There have been several publications examining antirefluxing ureteral stents that reduced vesicoureteral reflux during micturition and infection of transplanted kidneys. Other novel methods of removing a stent include new biodegradable ureteral stents and metal beads attached to the stent used in tandem with a magnetic catheter. Several new metal and mesh stents were described for use in patients with malignant ureteral obstruction. Last, new stent coatings with antimicrobial peptides have also been described. Summary The search continues for the perfect stent and there has been promising progress over the past 2 years.
Comparative outcomes of hand-assisted laparoscopic donor nephrectomy using midline incision or low transverse incision for hand-assisted port placement.

Gwon J.G., Jun H., Kim M.G., Boo Y.J., Jung C.W.

Embase
Experimental and Clinical Transplantation. 14 (3) (pp 282-286), 2016. Date of Publication: June 2016.

[Article]
AN: 610598775

Objectives: Hand-assisted laparoscopic donor nephrectomy is performed in many centers for donor nephrectomy. A midline incision for hand-assisted port placement is generally used but produces an unsightly scar. In this study, patients who had hand-assisted laparoscopic donor nephrectomy with low transverse incision were compared with those who received a midline incision. Materials and Methods: Our study group included patients who received hand-assisted laparoscopic donor nephrectomy from February 2012 to December 2014 at Korea University Anam Hospital. We retrospectively compared outcomes of these patients based on midline incision (45 patients) versus low transverse incision (17 patients). Risk factors, including age, sex, body mass index, creatinine level, glomerular filtration rate of allograft, side of graft kidney, number of renal arteries, duration of surgical procedure, and warm ischemic time, were compared between the midline and low transverse incision groups. Results: When we compared the midline versus low transverse incision groups, duration of surgical procedure (P = .043), postoperative day 3 glomerular filtration rate (P = .017), and postoperative day 3 pain score (P = .049) were significantly higher in the low transverse incision group versus the midline incision group. Postoperative day 3 results for duration of hospitalization (P = .030) and pain score (P = .021) were also significantly higher in the low transverse versus midline incision groups when we focused on patients with left nephrectomy. Conclusions: Hand-assisted laparoscopic donor nephrectomy with low transverse incision is more painful and necessitates a longer hospital stay and longer surgical procedure. Despite these disadvantages, hand-assisted laparoscopic donor nephrectomy with low transverse incision can offer a better cosmetic outcome with no definitive differences regarding renal function compared with a midline incision. Surgeons should consider these aspects when deciding on the best method for donor nephrectomy.

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Comparison of urologic complications between ureteroneocystostomy and ureteroureterostomy in renal transplant: A meta-analysis.
Suttle T., Fumo D., Baghmanli Z., Saltzman B., Ortiz J.
Embase
Experimental and Clinical Transplantation. 14 (3) (pp 276-281), 2016. Date of Publication: June 2016.
[Article]
AN: 610598765
Objectives: Transplant surgeons use a myriad of ureteral anastomotic techniques in renal transplant. Although the Lich-Gregoir extravesical anastomosis is the most common, ureteroureterostomy also is used. In this meta-analysis, our objective was to compare the complication rates of these 2 techniques as reported in the literature. Materials and Methods: A systematic review of the literature revealed 44 articles, 6 of which met our inclusion criteria. Studies were compiled using Review Manager (RevMan version 5.3, Nordic Cochrane Centre, Cochrane Collaboration, Copenhagen, Denmark). Forest plots were generated to assess relative risk. A fixed-effects model was used for low heterogeneity, and a random-effects model was used for high heterogeneity. Results: Overall complications were similar for both procedures (relative risk, 1.22; 95% confidence interval, 0.9-1.65), as were rates of urine leak and fistula (relative risk, 0.79; 95% confidence interval, 0.17-3.64) and hematuria (relative risk, 0.24; 95% confidence interval, 0.001-4.84). Stricture, obstruction, and stone formation were more common after
ureteroureterostomy (relative risk, 0.63; 95% confidence interval, 0.45-0.88), whereas vesicoureteral reflux (relative risk, 6.82; 95% confidence interval, 1.68-27.61) and urinary tract infection (relative risk, 2.29; 95% confidence interval, 1.3-4.03) were more common after ureteroneocystostomy. Conclusions: With similar overall complication rates, both procedures can be viewed as being acceptable primary anastomotic techniques. In light of differing individual complication rates and the scarcity of data comparing the 2 methods, no specific recommendation regarding that technique should be used can currently be elucidated. We believe that further prospective studies comparing ureteroneocystostomy and primary ureteroureterostomy may reveal which is superior regarding complication rates.

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236.
Cell-mediated and humoral acute vascular rejection and graft loss: A registry study.
Teo R.Z.C., Wong G., Russ G.R., Lim W.H.
Embase
Nephrology. 21 (2) (pp 147-155), 2016. Date of Publication: 01 Feb 2016.
[Article]
Aims Rejection of renal allografts following transplantation continues to be a major impediment to long-term graft survival. Although acute vascular rejection (AVR) is associated with a high risk of graft loss, it remains unclear whether AVR with accompanied cellular or acute humoral rejection (AHR) have dissimilar outcomes. The aim of this registry study was to examine the association between subtypes of AVR and graft loss. Methods Using Australia and New Zealand Dialysis and Transplant registry, primary kidney transplant recipients between 2005 and 2012 whose first rejection episode was AVR were included and categorized into AVR-none (AVR without other rejections), AVR-CG (AVR with cellular and/or glomerular rejections), and AVR-AHR (AVR with AHR). Association between AVR groups and graft loss was examined using logistic and Cox regression models. Results Of the 274 recipients, 61 (22.3%) experienced AVR-none, 79 (28.8%) AVR-AHR and 134 (48.9%) AVR-CG. Compared with AVR-none and AVR-CG, AVR-AHR was associated with the highest incidence of overall graft loss at 3 months (12%, 10% and 27%, respectively, chi2 = 11.88, P = 0.003). AVR-AHR was associated with almost a threefold greater risk of death-censored graft loss compared with AVR-none (adjusted hazard ratio 2.84, 95% confidence interval 1.22-2.62, P < 0.01). Conclusion AVR-AHR is associated with the poorest outcome with over 25% of grafts being lost 3 months after transplantation. Future studies evaluating factors that predict graft loss in AVR-AHR may help determine prognosis and inform treatment practices.

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OBJECTIVES: Laparoscopic living-donor nephrectomy is now widely used because of its many beneficial features. Currently, there are 2 major techniques: the laparoscopic intraperitoneal approach and the retroperitoneoscopic approach. There is no evidence to support one particular approach over another. Therefore, in this study, we conducted a systematic literature review with the aim of defining which technique is superior. MATERIALS AND METHODS: The Embase, PubMed, and Cochrane literature databases were searched for English language articles published between January 1994 and January 2013 using the terms "laparoscopic donor nephrectomy," "retroperitoneoscopic donor nephrectomy," and "live donor nephrectomy." A meta-analysis was undertaken, and I(2) statistical analyses were used to describe the percentage of variation across studies due to heterogeneity rather than chance.

RESULTS: With the use of our selection criteria, 55 papers on the laparoscopic intraperitoneal approach and 6 papers on the retroperitoneoscopic approach were included in this study. We found significantly lower transfusion rate, fewer patients with delayed graft functions, less vessel injuries, and less conversion to open surgical procedure with the retroperitoneoscopic approach than with the laparoscopic intraperitoneal approach.

CONCLUSIONS: From this review, a high degree of study heterogeneity was identified, suggesting an urgent need for consistency in reporting laparoscopic living-donor nephrectomy. Results of the meta-analyses may define a better technique for the future. The retroperitoneoscopic approach may be better than the laparoscopic intraperitoneal approach with fewer complications and fewer patients with delayed graft function. Further study of laparoscopic
living-donor nephrectomy is recommended to define a standard and thus to minimize the surgical morbidities.


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238.
Acute renal artery occlusion: Presentation, treatment, and outcome.
Silverberg D., Menes T., Rimon U., Salomon O., Halak M.
Embase
[Article]
AN: 612718519

Objective Acute renal artery occlusion is an uncommon disease requiring rapid diagnosis for prevention of kidney loss or permanent kidney damage. The purpose of this study was to identify patients with acute kidney infarction; to characterize their presentation, imaging, and treatment; and to compare the subgroup of patients who underwent catheter-directed thrombolysis (CDT) with those who were treated without intervention. Methods Hospital records between 2005 and 2015 were queried for keywords suggestive of kidney infarction. Patients were divided into two groups: the CDT group and the noninterventional group. Data collected included demographics, comorbidities, methods of diagnosis, and time from presentation to diagnosis. For patients treated with CDT, additional data collected included details of thrombolytic therapy and follow-up studies. The two groups were compared regarding their clinical characteristics and outcome. Results Forty-two patients were diagnosed with acute kidney infarction; 13 (31%) were treated with CDT and 29 (69%) were treated conservatively. Median time from presentation to diagnosis was 42 hours in the CDT group and 32 hours in the untreated group. Among the CDT group, complete or partial resolution of the thrombus was seen in all patients. Two required permanent dialysis, both
renal transplant patients. Median follow-up was 30 months (interquartile range, 2.7-46.2) in the CDT group and 13 months (interquartile range, 0.11-16) in the noninterventional group. Mean creatinine clearance at diagnosis and at last follow-up was 74.3 and 54.6 mL/min, respectively, in the CDT group (a decrease of 27%; P =.032) and 66.1 and 60 mL/min in the conservatively treated group (a decrease of 9%; P =.04). Follow-up imaging was available in nine patients treated with CDT. Mean interval from treatment to follow-up imaging was 13 months (range, 1-35 months) and consistently showed a functional but smaller treated kidney. (Mean pole-to-pole kidney length at baseline and late follow-up: 10.4 cm and 8.5 cm, respectively). Conclusions Most patients presenting with acute kidney infarction are managed conservatively. A subset of patients with complete occlusion of the renal artery undergo CDT with good angiographic results. The treated kidney is expected to decrease in size over time, and overall kidney function is expected to decrease compared with baseline. Deterioration in renal function appears to stabilize and does not continue over time. CDT for acute renal artery occlusion is a safe modality of therapy and should be attempted for the purpose of kidney salvage, even in the setting of prolonged ischemia.

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Status EMBASE

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Year of Publication 2016
First 1500 Kidney Transplants at the Institute of Nephrology and Urology in Uruguay: Analysis of the Results.


Embase
Transplantation Proceedings. 48 (2) (pp 616-619), 2016. Date of Publication: 01 Mar 2016.
[Article]
AN: 610107959

Background The Institute of Nephrology and Urology (INU) has performed 75% of kidney transplantations (KT) in Uruguay during its 35 years of activity, with 90.6% from cadaveric donors. We investigated the risk factors (RF) for delayed graft function (DGF) and patient and graft survival (SV).

Methods We analyzed retrospectively the characteristics and evolution of 1500 KT performed by INU until December 2014. The incidence of DGF and RF for patient and graft SV were analyzed in 4 eras, according to the year that KT was performed. Results The number of KT per year has progressively increased until reaching 40 KT per million population in 2006, with a decrease of the living donor KT (LDKT) rate. The age of the donors (D) and recipients (R) as well as the time on dialysis (TOD) have progressively increased over the different eras. Five hundred twenty-five R (35%) presented with DGF. The RF for DGF were the age of the R and D, the TOD, the DDKT, and the warm ischemia time (WIT). In the DDKT group, the cold ischemia time and "died of stroke" were added factors. The death-censored graft SV at 1, 5, 10, and 15 years were 90%, 76%, 62%, and 49%, respectively. They improved as from era I, the patient SV being 92%, 83%, and 75% at 1, 5, and 10 years, in era I; 98%, 93%, and 86% in era II; 98%, 92%, and 83% in era III; and 95% and 90% at 1 and 5 years in era IV (P <.001). The graft SV over the same periods was 76%, 58%, and 40% in era I; 88%, 68%, and 52% in era II; 93%, 81%, and 70% in era III; and 93% and 85% at 1 and 5 years in era IV (P <.0001). The RF for patient SV were diabetes mellitus, era I, lower albuminemia, older age or TOD, and DGF. For kidney SV, the era, the age of the R, TOD, DGF, and D older than 60 years were RF associated with a worse evolution. In DDKT, the RF for the graft SV were the era, younger age of the R, and DGF. The group with the worst graft SV was the one made up of children and adolescents. Conclusions Our results relating to patient and graft SV are acceptable and comparable to those mentioned on large records such as the OPNT/SRTR and the Collaborative Transplant Study. This has been the case, even though we have transplanted increasingly aged patients, with increasingly aged donors, or donors with associated pathology. The risk factors that we found both for DGF and SV have also been pointed out by other authors. The validity of some findings has the limitation of being from a retrospective analysis; hence, they should be corroborated by a prospective study.
240.
Investigating kidney donation as a risk factor for hypertension and microalbuminuria: Findings from the swiss prospective follow-up of living kidney donors.
Thiel G.T., Nolte C., Tsinalis D., Steiger J., Bachmann L.M.
Embase
BMJ Open. 6 (3) (no pagination), 2016. Article Number: e010869. Date of Publication: 2016.
[Article]
AN: 609229714
Objectives: To assess the role of nephrectomy as a risk factor for the development of hypertension and microalbuminuria. Design: Prospective, long-term follow-up study. Setting: Swiss Organ Living-Donor Health Registry. Participants: All living kidney donors in Switzerland between 1993 and 2009. Interventions: Data on health status and renal function before 1 year and biennially after donation were collected. Primary and secondary outcome measures: Comparison of 1-year and 5-year occurrences of hypertension among normotensive donors with 1-year and 5-year estimates from the Framingham hypertension risk score. Multivariate random intercept models were used to investigate changes of albumin excretion after donation, correcting for repeated measurements and cofactors such as age, male gender and body mass index. Results: A total of 1214 donors contributed 3918 data entries with a completed biennial follow-up
rate of 74% during a 10-year period. Mean (SD) follow-up of donors was 31.6 months (34.4). Median age at donation was 50.5 years (IQR 42.2-58.8); 806 donors (66.4%) were women. Donation increased the risk of hypertension after 1 year by 3.64 (95% CI 3.52 to 3.76; p<0.001). Those participants remaining normotensive 1 year after donation return to a risk similar to that of the healthy Framingham population. Microalbuminuria before donation was dependent on donor age but not on the presence of hypertension. After nephrectomy, hypertension became the main driver for changes in albumin excretion (OR 1.19; 95% CI 0.13 to 2.25; p=0.03) and donor age had no effect. Conclusions: Nephrectomy propagates hypertension and increases susceptibility for the development of hypertension-induced microalbuminuria.


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241.
Hadjievangelou N., Kulendran M., McGlone E.R., Reddy M., Khan O.A.

Embase
International Journal of Surgery. 28 (pp 191-195), 2016. Date of Publication: April 01, 2016. [Article]
AN: 609163438
Obesity is common amongst patients with renal transplants (RT). It is associated not only with generic obesity-related complications including diabetes, but also with higher rates of graft rejection and loss. A Best Evidence Topic in surgery was written according to a structured protocol: this is a systematic review of the literature, suitable when the quality of available evidence is low. The question addressed was: is weight-loss surgery (WLS) safe and effective in patients that have had a previous renal transplant? Three prospective case series and one multicentre retrospective study were identified, together reporting on a total of 112 patients who underwent WLS after RT. Eighty-seven patients underwent open WLS and 25 patients underwent laparoscopic operations of which 11 had sleeve gastrectomy and 14 RYGB. Percentage excess weight loss was highly variable between the studies, ranging from an average of 30.8%-75% at 12 months. One graft rejection occurred within 30 days of surgery. All studies were limited by lack of suitable comparison group, short follow-up and heterogeneity in type of bariatric procedure and approach. To date, there is limited evidence to suggest that bariatric surgery is safe and has good short-term outcomes for selected obese patients post-renal transplant.

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PMID

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Publisher
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Date Created
20160409

Year of Publication
2016

Pancreas Transplantation in the Modern Era.
Redfield R.R., Rickels M.R., Naji A., Odorico J.S.

Embase

[Review]

AN: 608433857

The field of pancreas transplantation has evolved from an experimental procedure in the 1980s to become a routine transplant in the modern era. With short- and long-term outcomes continuing to improve and the significant mortality, quality-of-life, and end-organ disease benefits, pancreas transplantation should be offered to more patients. In this article, we review current indications, patient selection, surgical considerations, complications, and outcomes in the modern era of pancreas transplantation.

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PMID

Prolonged warm ischemia time is associated with graft failure and mortality after kidney transplantation.
Warm ischemia time is a potentially modifiable insult to transplanted kidneys, but little is known about its effect on long-term outcomes. Here we conducted a study of United States kidney transplant recipients (years 2000-2013) to determine the association between warm ischemia time (the time from organ removal from cold storage to reperfusion with warm blood) and death/graft failure. Times under 10 minutes were potentially attributed to coding error. Therefore, the 10-to-under-20-minute interval was chosen as the reference group. The primary outcome was mortality and graft failure (return to chronic dialysis or preemptive retransplantation) adjusted for recipient, donor, immunologic, and surgical factors. The study included 131,677 patients with 35,901 events. Relative to the reference patients, times of 10 to under 20, 20 to under 30, 30 to under 40, 40 to under 50, 50 to under 60, and 60 and more minutes were associated with hazard ratios of 1.07 (95% confidence interval, 0.99-1.15), 1.13 (1.06-1.22), 1.17 (1.09-1.26), 1.20 (1.12-1.30), and 1.23 (1.15-1.33) for the composite event, respectively. Association between prolonged warm ischemia time and death/graft failure persisted after stratification by donor type (living vs. deceased donor) and delayed graft function status. Thus, warm ischemia time is associated with adverse long-term patient and graft survival after kidney transplantation. Identifying strategies to reduce warm ischemia time is an important consideration for future study.
Atherothrombotic Risk Stratification and the Efficacy and Safety of Vorapaxar in Patients with Stable Ischemic Heart Disease and Previous Myocardial Infarction.
Embase
[Article]
AN: 611522428
Background: Patients with stable ischemic heart disease and previous myocardial infarction (MI) vary in their risk for recurrent cardiovascular events. Atherothrombotic risk assessment may be useful to identify high-risk patients who have the greatest potential to benefit from more intensive secondary preventive therapy such as treatment with vorapaxar. Methods: We identified independent clinical indicators of atherothrombotic risk among 8598 stable, placebo-treated patients with a previous MI followed up for 2.5 years (median) in TRA 2degreeP-TIMI 50 [Thrombin Receptor Antagonist in Secondary Prevention of Atherothrombotic Ischemic Events-TIMI 50]. The efficacy and safety of vorapaxar (SCH 530348; MK-5348) were assessed by baseline risk among patients with previous MI without prior stroke or transient ischemic attack for whom there is a clinical indication for vorapaxar. End points were cardiovascular death, MI, or ischemic stroke and GUSTO (Global Use of Strategies to Open Occluded Coronary Arteries) severe bleeding. Results: The 9 independent risk predictors were age, diabetes mellitus, hypertension, smoking, peripheral arterial disease, previous stroke, previous coronary bypass grafting, heart failure, and renal dysfunction. A simple integer-based scheme using these predictors showed a strong graded relationship with the rate of cardiovascular death/MI/ischemic stroke and the individual components (P for trend <0.001 for all). High-risk patients (>=3 risk indicators; 20% of population) had a 3.2% absolute risk reduction in cardiovascular disease/MI/ischemic stroke with vorapaxar, and intermediate-risk patients (1-2 risk indicators; 61%) had a 2.1% absolute risk reduction (P<0.001 each), translating to a number needed to treat
of 31 and 48. Bleeding increased across risk groups (P for trend<0.01); however, net clinical outcome was increasingly favorable with vorapaxar across risk groups. Fatal bleeding or intracranial hemorrhage was 0.9% with both treatments in high-risk patients. Conclusions: Stratification of baseline atherothrombotic risk can assist with therapeutic decision making for vorapaxar use for secondary prevention after MI. Clinical Trial Registration: URL: https://www.clinicaltrials.gov. Unique identifier: NCT00526474.

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Objective Acute kidney injury is a common but serious complication of coronary artery bypass grafting. We investigated whether the effect of the timing of coronary angiography on acute kidney injury after coronary artery bypass grafting is influenced by the use of cardiopulmonary bypass. Methods We included, retrospectively, 2371 patients who underwent coronary artery bypass grafting whether cardiopulmonary bypass was used (on-pump coronary artery bypass) or not (off-pump coronary artery bypass). Postoperative acute kidney injury was defined by the consensus Kidney Disease: Improving Global Outcomes Definition and Staging criteria. Multivariate logistic regression and propensity score analysis were performed to evaluate the association of the time interval between coronary angiography and coronary artery bypass grafting with postoperative acute kidney injury. Results The incidence of acute kidney injury was higher in patients who underwent coronary angiography 7 days or less before coronary artery bypass grafting than in those who underwent it more than 7 days before coronary artery bypass grafting (42.7% vs 38.5%, P =.037). There was significant interaction between the timing of coronary angiography and the use of cardiopulmonary bypass for postoperative acute kidney injury (P =.019). The time interval between coronary angiography and surgery was independently associated with postoperative acute kidney injury in patients undergoing on-pump coronary artery bypass only. In an adjusted propensity score model, coronary angiography within 7 days of on-pump coronary artery bypass was a predictor of postoperative acute kidney injury (odds ratio, 1.742; 95% confidence interval, 1.144-2.653; P =.010). Conclusions A shorter interval between coronary angiography and surgery was influenced the occurrence of acute kidney injury in patients undergoing on-pump coronary artery bypass. However, the interval is not an independent risk factor for the development of postoperative acute kidney injury in patients who undergo off-pump coronary artery bypass.
Introduction. Receiving a kidney transplant from donors with multiple renal arteries (MRAs) is suggested to be associated with higher risk of vascular and urologic complications and poor allograft outcomes compared to the donors with single renal artery (SRA). We evaluated survival rates in the recipients from donors with MRAs compared to those from donors with SRA.

Materials and Methods. In a retrospective study on 115 kidney allograft recipients, demographic characteristics and the outcomes of kidney transplantation were compared between the recipients from donors with MRAs compared to those from donors with SRA. These included acute tubular necrosis, acute allograft rejection, hypertension, vascular complications, urologic complications, kidney function indicators, and allograft survival at 1 year. Results. There was no significant difference in the recipients' age, sex distribution, and weight, donors' age, donor-recipient familial relation, urologic complications, and duration of hospitalization between the two groups. However, MRA was significantly associated with a higher likelihood of right-side kidney donation, longer warm and cold ischemia times, and lower glomerular filtration rate and higher serum creatinine concentrations at discharge and 12 months after transplantation, as compared to SRA.
transplants. No significant difference was seen in late complications including hypertension and renal artery stenosis. One-year graft survival was slightly poorer in the MRA group than the SRA group. Conclusions. Our results demonstrate that kidney allografts with MRAs are associated with risks but have acceptable outcomes during the 1st year after transplantation, as compared to SRA kidney allografts.

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Year of Publication 2016

247.
Results of Renal Transplantation on Alloplastic Arterial Grafts.

Embase
Urologia Internationalis. 96 (2) (pp 157-163), 2016. Date of Publication: 01 Feb 2016.

[Article]
Background: The aim of this retrospective study was to report results of a consecutive series of kidney transplant patients in whom the renal artery was implanted on a prosthetic vascular graft (PVG). Methods: Between January 2011 and December 2014, 208 deceased donor renal transplantations (68 female, 140 male, mean age 52, SD 16 years) were performed. Medical charts and outpatient clinical records of patients who had undergone renal artery implantation on a PVG were reviewed. Extensive literature research added to our 4 patients further 170 published cases during 1989 and 2015 and was compared with regular transplanted patients. Data on patient characteristics, prior vascular procedures, postoperative and long-term outcome were collected. Results: Patients with transplant renal artery anastomosis on a PVG were 4 years older than the control group. Function of the graft was similar in these patients compared to regular renal transplant patients. Resistance indices assessed in our clinic over the entire follow-up period showed also no significant difference between the 2 groups. Thirty-day mortality was 6% (none in our group), which occurred mostly in combination when renal transplantation and PVG replacement was performed simultaneously. Conclusion: Grafting of the renal artery to a PVG is feasible and yields good results, despite the technical difficulties involved.

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249.
Comparative study of laparoscopic and mini-incision open donor nephrectomy: Have we heard the last word in the debate?.
Yadav K., Aggarwal S., Guleria S., Kumar R.
Embase
Clinical Transplantation. 30 (3) (pp 328-334), 2016. Date of Publication: 01 Mar 2016. [Article]
Objective: Laparoscopic donor nephrectomy (LDN) is generally considered a better option than open donor nephrectomy (ODN) as it is associated with better cosmesis, less post-operative pain and faster recovery. Mini-incision donor nephrectomy (MDN) has proven to be an effective and less invasive modification of classic ODN. Our aim was to compare the peri-operative outcomes and quality of life of donors following laparoscopic and mini-incision ODN. Methods: One hundred patients, underwent donor nephrectomy using laparoscopic approach (n = 50) or open mini-incision approach (n = 50) over a period of 18 months. Data were entered into a prospective database and analyzed retrospectively. Results: The mean operative (skin to skin) time for MDN, 53.9 min (range, 40-75 min), was significantly shorter than the 93.7 min (range, 75-140 min) for LDN. The laparoscopic donors had a longer hospital stay, warm ischemia time and higher operative and post-operative cost. There was no significant difference in the pain scores, graft function, or quality of life between the two groups. Conclusions: MDN compares well with the laparoscopic approach in terms of post-operative pain, graft function and quality of life of donors. Significantly less operative time along with the reduced cost makes it a better option in our predominantly lower BMI patient population.
Renal Blood Oxygenation Level-dependent Imaging in Longitudinal Follow-up of Donated and Remaining Kidneys.

Embase
Radiology. 279 (3) (pp 795-804), 2016. Date of Publication: 01 Jun 2016.
[Article]
AN: 616210916

Purpose To determine renal oxygenation changes associated with uninephrectomy and transplantation in both native donor kidneys and transplanted kidneys by using blood oxygenation level-dependent (BOLD) MR imaging. Materials and Methods The study protocol was approved by the local ethics committee. Thirteen healthy kidney donors and their corresponding recipients underwent kidney BOLD MR imaging with a 3-T imager. Written informed consent was obtained from each subject. BOLD MR imaging was performed in donors before uninephrectomy and in donors and recipients 8 days, 3 months, and 12 months after transplantation. R2* values, which are inversely related to tissue partial pressure of oxygen, were determined in the cortex and medulla. Longitudinal R2* changes were statistically analyzed by using repeated measures one-way analysis of variance with post hoc pair-wise comparisons. Results R2* values in the remaining kidneys significantly decreased early after uninephrectomy in both the medulla and cortex (P < .003), from 28.9 sec(-1) +/- 2.3 to 26.4 sec(-1) +/- 2.5 in the medulla and from 18.3 sec(-1) +/- 1.5 to 16.3 sec(-1) +/- 1.0 in the cortex, indicating increased oxygen content. In donors, R2* remained significantly decreased in both the medulla and cortex at 3 (P < .01) and 12 (P < .01) months. In transplanted kidneys, R2* remained stable during the first year after transplantation, with no significant change. Among donors, cortical R2* was found to be negatively correlated with estimated glomerular filtration rate (R = -0.47, P < .001). Conclusion The results suggest that BOLD MR imaging may potentially be used to monitor renal functional changes in both remaining and corresponding transplanted kidneys. (©) RSNA, 2016.


Institution
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251.
Evolution of IgA nephropathy into anaphylactoid purpura in six cases—further evidence that IgA nephropathy and Henoch-Schönlein purpura nephritis share common pathogenesis.
Kamei K., Ogura M., Sato M., Ito S., Ishikura K.
Embase
Pediatric Nephrology. 31 (5) (pp 779-785), 2016. Date of Publication: 01 May 2016.
[Article]
AN: 607304484
Background: As the morphological and immunohistochemical manifestations of immunoglobulin A (IgA) nephropathy and Henoch-Schönlein purpura nephritis (HSPN) are very similar, they are considered to share a common pathogenesis. Although HSPN usually develops after the appearance of anaphylactoid purpura, we have encountered patients whose renal symptoms preceded purpura. Methods: We reviewed the clinical courses of patients who were first diagnosed with IgA nephropathy, but developed purpura later, at the National Center for Child Health and Development in Tokyo, Japan. Results: Of the 53 patients who were diagnosed with primary IgA nephropathy at our institute during the study period (March 2002 to July 2015), six (11%) developed anaphylactoid purpura after the diagnosis of primary IgA nephropathy and therefore met the inclusion criteria. Duration between the onset of nephritis and subsequent appearance of purpura ranged from 5 months to 14 years. One patient reached end-stage renal failure due to IgA nephropathy and developed purpura after renal transplantation. All renal biopsies performed before the appearance of purpura showed mesangial proliferation with predominant IgA deposits. Urinary findings deteriorated in three patients after the appearance of purpura, including one patient who developed rapidly progressive glomerulonephritis. Renal biopsy findings worsened in two patients. At the last observation, two patients showed mild renal insufficiency. Conclusions: Our clinical experience and previous reports support the argument that IgA nephropathy and HSPN are different manifestations of a single disease. Hence, it is acceptable to consider that they are variants of a single disease.
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Introduction The live donor nephrectomy is an unusual surgical procedure as it is performed on healthy individuals. It is important to make the procedure as safe as possible without compromising the health of the donor and graft function. Justification In Mexico during 2014, 2610 kidney transplantations performed, and 1862 grafts were from living donors. Objective We describe our experience with hand-assisted laparoscopic nephrectomy on live donors for kidney transplantation. Materials and Methods We present a descriptive and observational study in which all living donors who completed the study protocol for renal transplantation are included. Results From September 2006 to July 2015, there were 238 hand-assisted laparoscopic nephrectomies with live donors; 227 (95.37%) were performed on the left side and 11 (4.63%) on the right side. Of donors, 54.1% were females. The average values for the variables analyzed
were age 38.17 years, 25.94 BMI, creatinine 0.82-1.13 mg/dL pre- and postoperative month respectively, length of stay 4.95 (range 2-8), warm ischemia 5.07 (range 3-13) minutes, surgical time 168.85 minutes (range 90-306), and transsurgical bleeding 139 055 mL (range 25-650). One patient was reoperated for abdominal pain and bloating without evidence of pathology, attributing it to metabolic ileus. Two patients were converted to open surgery; 1 by technical problems with the laparoscopic equipment and the second by bleeding from the renal vein, both with good results. Discussion and Conclusions Laparoscopic nephrectomy is a safe method that allows kidney donors to have a speedy recovery without modifying the survivals of renal grafts. Copyright © 2016 Elsevier Inc.


Status EMBASE Institution (Fabian, Mancilla, Aburto, Lopez, Almaguer, Garcia, Arcos) Department of Nephrology and Kidney Transplantation, Instituto Nacional de Cardiologia Dr. Ignacio Chavez, Juan badiano #1, Tlalpan, Belisario Dominguez, Seccion XVI ZC 14080, Mexico (Aburto, Kasep, Basilio) Department of Urology, Instituto Nacional de Cardiologia Dr. Ignacio Chavez, Mexico Publisher Elsevier USA Date Created 20160514 Year of Publication 2016

253.
Ex Vivo Perfusion Characteristics of Donation After Cardiac Death Kidneys Predict Long-Term Graft Survival.
Sevinc M., Stamp S., Ling J., Carter N., Talbot D., Sheerin N.
Embase Transplantation Proceedings. 48 (10) (pp 3251-3260), 2016. Date of Publication: 01 Dec 2016. [Article] AN: 613553593
Background Ex vivo perfusion is used in our unit for kidneys donated after cardiac death (DCD). Perfusion flow index (PFI), resistance, and perfusate glutathione S-transferase (GST) can be measured to assess graft viability. We assessed whether measurements taken during perfusion could predict long-term outcome after transplantation. 

Methods All DCD kidney transplants performed from 2002 to 2014 were included in this study. The exclusion criteria were: incomplete data, kidneys not machine perfused, kidneys perfused in continuous mode, and dual transplantation. There were 155 kidney transplantations included in the final analysis. Demographic data, ischemia times, donor hypertension, graft function, survival and machine perfusion parameters after 3 hours were analyzed. Each perfusion parameter was divided into 3 groups as high, medium, and low. Estimated glomerular filtration rate was calculated at 12 months and then yearly after transplantation. Results There was a significant association between graft survival and PFI and GST (P values,.020 and.022, respectively). PFI was the only independent parameter to predict graft survival. Conclusions A low PFI during ex vivo hypothermic perfusion is associated with inferior graft survival after DCD kidney transplantation. We propose that PFI is a measure of the health of the graft vasculature and that a low PFI indicates vascular disease and therefore predicts a worse long-term outcome.

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Year of Publication 2016
Background: The benefits of live donor kidney transplantation must be balanced against the potential harm to the donor. Well-designed prospective studies are needed to study the long-term consequences of kidney donation. Methods: The “LOng-term follow-up after liVE kidney donation” (LOVE) study is a single center longitudinal cohort study on long-term consequences after living kidney donation. We will study individuals who have donated a kidney from 1981 through 2010 in the Erasmus University Medical Center in Rotterdam, The Netherlands. In this time period, 1092 individuals donated a kidney and contact information is available for all individuals. Each participating donor will be matched (1:4) to non-donors derived from the population-based cohort studies of the Rotterdam Study and the Study of Health in Pomerania. Matching will be based on baseline age, gender, BMI, ethnicity, kidney function, blood pressure, pre-existing co-morbidity, smoking, the use of alcohol and highest education degree. Follow-up data is collected on kidney function, kidney-related comorbidity, mortality, quality of life and psychological outcomes in all participants. Discussion: This study will provide evidence on the long-term consequences of live kidney donation for the donor compared to matched non-donors and evaluate the current donor eligibility criteria. Trial registration: Dutch Trial Register NTR3795.

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Characterization of patients with lupus nephritis included in a large cohort from the Spanish society of rheumatology registry of patients with systemic lupus erythematosus (RELESSER).


Embase


[Article]

AN: 609166481
The aim of the study was to profile those patients included in the RELESSER registry with histologically proven renal involvement in order to better understand the current state of lupus nephritis (LN) in Spain. RELESSER-TRANS is a multicenter cross-sectional registry with an analytical component. Information was collected from the medical records of patients with systemic lupus erythematosus who were followed at participating rheumatology units. A total of 359 variables including demographic data, clinical manifestations, disease activity, severity, comorbidities, LN outcome, treatments, and mortality were recorded. Only patients with a histological confirmation of LN were included. We performed a descriptive analysis, chi-square or Student's t tests according to the type of variable and its relationship with LN. Odds ratio and confidence intervals were calculated by using simple logistic regression. LN was histologically confirmed in 1092/3575 patients (30.5%). Most patients were female (85.7%), Caucasian (90.2%), and the mean age at LN diagnosis was 28.4-12.7 years. The risk for LN development was higher in men (M/F:47.85/30.91%, P<0.001), in younger individuals (P<0.001), and in Hispanics (P=0.03). Complete response to treatment was achieved in 68.3% of patients; 10.35% developed ESRD, which required a kidney transplant in 45% of such cases. The older the patient, the greater was the likelihood of complete response (P<0.001). Recurrences were associated with persistent lupus activity at the time of the last visit (P<0.001) and with ESRD (P<0.001). Thrombotic microangiopathy was a risk factor for ESRD (P=0.04), as for the necessity of dialysis (P=0.01) or renal transplantation (P=0.03). LN itself was a poor prognostic risk factor of mortality (OR 2.4 [1.81-3.22], P<0.001). Patients receiving antimalarials had a significantly lower risk of developing LN (P<0.001) and ESRD (P<0.001), and responded better to specific treatments for LN (P=0.014). More than two-thirds of the patients with LN from a wide European cohort achieved a complete response to treatment. The presence of positive anti-Sm antibodies was associated with a higher frequency of LN and a decreased rate of complete response to treatment. The use of antimalarials reduced both the risk of developing renal disease and its severity, and contributed to attaining a complete renal response.

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Status EMBASE

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Serum troponin i level for diagnosis of acute coronary syndrome in patients with chronic kidney disease.


Embase
Iranian Journal of Kidney Diseases. 10 (1) (pp 11-16), 2016. Date of Publication: January 2016.

Introduction. Myocardial infarction is a common cause of mortality in patients with chronic kidney disease (CKD). Since troponins I and T levels rise in CKD patients without any myocardial cause, diagnostic value of cardiac troponins is not high in these patients. This study aimed to evaluate the value of troponin I and other cardiac biomarkers to differentiate acute coronary syndrome in CKD patients. Materials and Methods. In this cross-sectional study, patients with stage 3 to 5 of CKD with typical chest pain were enrolled. Troponins I and T and other biomarkers were
measured, and angiography was carried out in these patients. Cardiac biomarkers and other variables were evaluated in patients and compared with angiography results. Results. Ninety CKD patients with a mean age of 61.67 +/- 15.87 years were enrolled. Angiography results were normal in 48.9% of the patients, while it showed single-vessel disease in 14.5%, two-vessel disease in 23.3%, and three-vessel disease in 13.3%. Serum creatinine level, glomerular filtration rate, troponin I level, and creatine kinase level were not significantly different in patients with normal and abnormal angiography findings. The serum troponin I, creatine kinase, and creatine kinase-myocardial bound levels had no significant diagnostic values to differentiate abnormal angiography in CKD patients. Conclusions. Serum levels of cardiac troponin I and creatine kinase-myocardial bound were not suitable to diagnose ACS in CKD patients (stages 3 to 5); therefore, we suggest using other diagnostic attempts in similar conditions. More evaluation is needed to confirm these findings.

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257.

Long-term follow-up after right laparoscopic donor nephrectomy and inverted kidney transplant. Simforoosh N., Tabibi A., Soltani M.H., Zare S., Yahyazadeh S.R., Abadpoor B.

Embase
Objectives: The objective of this study was to investigate the long-term outcomes of inverted kidney transplant, an alternative easy and safe technique to overcome difficulties associated with short right renal vein anastomosis after laparoscopic donor nephrectomy. Materials and Methods: Seventy-nine laparoscopic donor nephrectomies and intentionally inverted renal transplants were performed between 2004 and 2009. For these transplants, the renal artery was ligated by Hem-o-lok (Weck Surgical Instruments, Teleflex Medical, Durham, NC, USA) and titanium clips, and the vein was closed with 2 Hem-o-lok clips, resulting in a short renal vein. By inverting the recovered kidney to the ipsilateral pelvic side of the recipient, the short renal vein is placed posterior and adjacent to the external iliac vein; this made an easy and safe short renal vein anastomosis possible. Results: All donor nephrectomies were completed laparoscopically, and no conversion to open surgery was required. The mean warm and cold ischemic times were 7.3 minutes (range, 3.2-17.5 min) and 37.5 minutes (range, 14.2-88 min). Only 6 patients (7.6%) had delayed graft function. At 5 years after transplant, patients showed excellent graft function, with mean serum creatinine level of 1.46 mg/dL and graft survival of 93.7%. There were no occurrences of vascular thrombosis or acute rejection. However, 5 years after transplant, 4 patients had died, with 3 patients still having functional transplanted kidneys and 1 patient experiencing graft rejection 1 month before death. Conclusions: Inverted kidney transplant is an easy and safe method to overcome the complications associated with short right renal vein anastomosis after laparoscopic donor nephrectomy. This simple modification might obviate the need to elongate a short renal vein.

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Date Created 20160301
Artery stenosis of the renal graft: Experience of a center of northeastern Brazil.
Nasserala J.C.L., Oliveira C.M.C., Cerqueira J.B.G., Souza S., Silva S.L., Santos L.C.D.O.,
Embase
Transplantation Proceedings. 48 (1) (pp 74-80), 2016. Date of Publication: 01 Jan 2016.
[Article]
AN: 608632836
Background Transplant renal artery stenosis (TRAS), the most common vascular complication after transplant (Tx), leads to resistant hypertension, impaired renal function, and even loss of the graft. The purpose of the study was to investigate the prevalence and factors associated with TRAS in northeastern Brazil. Methods The study was conducted as a retrospective case-control study in a population of Tx recipients in a renal Tx center in northeastern Brazil. Demographic and clinical characteristics of the recipients and donors, data related to the surgery, laboratory data, and number of anti-hypertensive drugs were assessed. Statistical analysis was performed with the use of SPSS 17.0. Results A total of 494 of 529 recipients were assessed, of which 24 had TRAS. The prevalence of TRAS was 4.8%. Twelve patients (50%) were men with a mean age of 46.7 +/- 13.5 years. The mean time of diagnosis was 89.9 days after Tx. The risk factors associated with TRAS were number of anti-hypertensive drugs >=2 (odds ratio, 17.0; confidence interval, 4.1 to 70.4; P =.001) and grafting with 2 or more arteries (odds ratio, 8.9; confidence interval, 1.4 to 56.6; P =.021). There was a significant reduction in mean systolic blood pressure (147.1 +/- 23.7 to 127.8 +/- 15.2 mm Hg, P =.001) and diastolic blood pressure (86.6 +/- 13.0 to 77.6 +/- 9.4 mm Hg, P =.001) after TRAS repair and in serum creatinine (2.8 +/- 2.4 to 1.9 +/- 1.8 mg/dL, P =.04). Conclusions Grafts with 2 or more arteries are associated with TRAS, as well as patients who use a higher number of anti-hypertensive drugs. TRAS repair was associated with improved blood pressure control and renal function.
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PMID
Effect of statins on the progression of coronary calcification in kidney transplant recipients. Yazbek D.C., De Carvalho A.B., Barros C.S., Pestana J.O.M., Canziani M.E.F.

Embase

Background: Coronary calcification (CAC) is highly prevalent in kidney transplant recipients (KTRs) and has been associated with cardiovascular morbidity and mortality. Some studies have shown a reduction in CAC progression with statin therapy in the general and chronic kidney disease (CKD) populations. Objectives and Methods: The aim of the present study was to evaluate the effect of statins on CAC progression in incident kidney transplant recipients. Patients were randomly assigned to the statin (n = 61, 10 mg daily) and control group (n = 59). CAC and biochemical analyses were performed at baseline and 12 months. Results: At baseline, CAC was observed in 30% and 21% of patients in the statin and control groups, respectively (p = 0.39). The calcium score at baseline and its absolute and relative changes over 12 months of follow up were similar among the groups. In the statin group, total cholesterol (p < 0.001), low density lipoprotein cholesterol (p < 0.001) and triglycerides (p = 0.005) decreased, and the estimated glomerular function rate increased (p<0.001) significantly. CRP levels remained stable (p = 0.52)
in the statin group but increased in the control group (p = 0.01). In the multivariate model, there was no difference in CAC progression between the groups (group effect p = 0.034; time-effect p = 0.23; interaction p = 0.74). Similar results were obtained when only patients with >= 10AU calcium score (calcified) were analyzed (group effect p = 0.051; time-effect p = 0.58; interaction p = 0.99). Conclusion: Although statins reduce the levels of cholesterol, triglycerides, inflammation and improve graft function, the dose adopted in the current study did not delay CAC progression within 12 months of follow up.

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260.
Vascular multiplicity should not be a contra-Indication for live kidney donation and transplantation.
Lafranca J.A., Bruggen M.V., Kimenai H.J.A.N., Tran T.C.K., Terkivatan T., Betjes M.G.H., Jzermans J.N.M.I., Dor F.J.M.F.

Embase

[Article]
AN: 609927106
Background: Whether vascular multiplicity should be considered as contraindication and therefore 'extended donor criterion' is still under debate. Methods: Data from all live kidney donors from 2006-2013 (n=951) was retrospectively reviewed. Vascular anatomy as imaged by MRA, CTA or other modalities was compared with intraoperative findings. Furthermore, the influence of vascular multiplicity on outcome of donors and recipients was studied. Results: In 237 out of 951 donors (25%), vascular multiplicity was present. CTA had the highest accuracy levels regarding vascular anatomy assessment. Regarding outcome of donors with vascular multiplicity, warm ischemia time (WIT) and skin-to-skin time were significantly longer if arterial multiplicity (AM) was present (5.1 vs. 4.0 mins and 202 vs. 178 mins). Skinto-skin time was significantly longer, and complication rates were higher in donors with venous multiplicity (203 vs. 180 mins and 17.2% vs. 8.4%). Outcome of renal transplant recipients showed a significantly increased WIT (30 vs. 26.7 minutes), higher rate of DGF (13.9% vs. 6.9%) and lower rate of BPAR (6.9% vs. 13.9%) in patients receiving a kidney with AM compared to kidneys with singular anatomy. Conclusions: We conclude that vascular multiplicity should not be a contra-indication, since it has little impact on clinical outcome in the donor as well as in renal transplant recipients.

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De Paolis P., Colonnelli R., Favaro A., Salem F., Vignally P., Carriero C., Iappelli M., Di Giulio S.
Embase
Transplantation Proceedings. 48 (2) (pp 329-332), 2016. Date of Publication: 01 Mar 2016.
[Article]
AN: 610108048
Transplantation of kidneys retrieved from expanded criteria donors is one of the options to expand the pool of available grafts, shorten the waiting time and increase the number of kidney transplant recipients. This study was a retrospective assessment of 99 patients who underwent renal transplantation during the period 2007-2015 with kidneys harvested from expanded criteria donors (ECD) as defined by the United Network for Organ Sharing (UNOS) following routine biopsy of all kidneys obtained by Karpinsky Score. They formed two groups: SKT (67 recipients that received a single kidney) and DKT (32 patients that received dual kidney transplant). An analysis of differences of two groups between graft and patient survival and graft function were performed after 8 years of observation. We observed between two groups the following statistical differences: Donor age (P <.001), basal high risk of recipients (P <.05), wait time before transplant (P <.05), recipient age (P <.001) delayed graft function (P <.005) while we observe similar values of donor renal function, outcome in graft and patient survival and graft function in recipients. The transplantation of kidneys obtained from expanded criteria donor, allows increase in the number of kidney transplants and in the respect of values of biopsy score and the donor renal function, showed in single or dual kidney transplantation with similar graft and patient survival.
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Publisher
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262.
Dual Kidney Transplantation: Evaluation of Recipient Selection Criteria at Niguarda Hospital.
Mariani A., Ferla F., De Carlis R., Rossetti O., Covucci E., Tripepi M., Concone G., Lauterio A.,
Mangoni I., De Carlis L.
Embase
Transplantation Proceedings. 48 (2) (pp 315-318), 2016. Date of Publication: 01 Mar 2016.
[Article]
AN: 610107978
Background Dual kidney transplantation (DKT) is a largely accepted strategy to enlarge the donor pool. Niguarda Hospital started this program in December 2010, and 38 DKT have been performed. In our series, we included recipients older than those in the other series published in literature. The aim of this study was to know if our recipient selection criteria for DKT are safe.
Methods We reviewed our data base of DKT and analyzed recipients' medical history, surgical technique, post-operative complications, graft survival, morbidity, and mortality. We then compared our results with the literature. Results From December 2010 to April 2015, 38 DKT were performed in Niguarda Hospital. Delayed graft function was present in 21 recipients. Explantation of both kidneys was performed in 1 patient and explantation of 1 kidney in 6 patients. Post-operative complications were present in 8 patients. Five patients returned to hemodialysis after DKT. One recipient died of medical post-operative sepsis. The mean follow-up was 24 months. Graft survival and patient survival were 86.84% and 97.93%, respectively. Compared with the literature, our series had similar mortality and morbidity rates, even if recipients' age was higher than in other series. Conclusions The strategy of DKT allocation in elderly recipients is safe. Further studies have to be performed to optimized selection of the recipients for DKT not to disadvantage younger patients in the transplant waiting list and to improve the technique of organ evaluation and preservation to refine graft allocation.
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263.
Decision Making by Young Transplant Surgeons Regarding Expanded-Criteria Donors with Acute Kidney Injury or Allocation Failure.
Embase
Transplantation Proceedings. 48 (3) (pp 695-700), 2016. Date of Publication: 01 Apr 2016.
[Article]
AN: 610517569
Background The utilization of expanded-criteria donors (ECDs) has increased to overcome donor shortages. Unfortunately, the discard rate has also increased, especially in ECDs with acute kidney injury (AKI). We evaluated the outcomes of kidney transplantation in ECDs and standard-criteria donors (SCDs) with and without AKI. Methods We reviewed the medical records of patients who underwent kidney transplantation. We used the AKI definition published by the Kidney Disease: Improving Global Outcomes group and reviewed the demographic characteristics of donors and recipients. We analyzed transplantation outcomes. Results Twenty-seven patients underwent kidney transplantation from ECDs with AKI (n = 6) or without AKI (n = 5) and SCDs with AKI (n = 6) or without AKI (n = 10). Initial creatinine and estimated glomerular filtration rate (eGFR) were not significantly different between the groups. The incidence of delayed graft function was highest in ECDs with AKI (n = 3; 36.4%), but this was not a
significantly difference. There was no difference in the last creatinine and eGFR in ECDs with AKI (1.32 mg/dL, 58.7 mL/min/1.73 m2), ECDs without AKI (1.67 mg/dL, 44.2 mL/min/1.73 m2), SCDs with AKI (0.94 mg/dL, 81.5 mL/min/1.73 m2) and SCDs without AKI (0.97 mg/dL, 81.8 mL/min/1.73 m2). Conclusions As the donor pool is extended to ECDs, young transplant surgeons may increasingly face decisions regarding ECDs with AKI or allocation failure. There is no consensus regarding discard criteria. However, if the donor showed initially normal creatinine levels or if dual-kidney transplantation can be performed, young transplant surgeons should not hesitate to use ECDs with AKI or allocation failure.

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264.

Postoperative Compensatory Changes and Blood Flow Parameter of the Preserved Kidney in Elderly Living Related Donors Evaluated by Doppler Ultrasonography.
Konno O., Nakamura Y., Yokoyama T., Kihara Y., Iwamoto H., Kawachi S.

Embase
Transplantation Proceedings. 48 (3) (pp 706-709), 2016. Date of Publication: 01 Apr 2016.
Introduction Elderly kidney donors have recently become more common in living related kidney transplantation in Japan. Therefore, it is important to evaluate whether kidney function in elderly donors after nephrectomy is preserved over long periods of time. Doppler ultrasonography measurement is practical for donors after nephrectomy because it involves simple and noninvasive examinations. Doppler ultrasonography can detect compensatory hypertrophy and blood flow parameters, namely resistive index (RI) and pulsatility index (PI), of the preserved kidney in living donors. Patients and Methods Our study included 58 donors, divided into 2 groups according to age; the elderly donor group was comprised of those 65 years old or older. We measured length, width, and short diameter of the preserved kidney using Doppler ultrasonography, and calculated kidney volume. Results The elderly group was comprised of 13 patients. In this group, the median preserved kidney volume was 145.0 cm³ (101.8-193.5) before nephrectomy, and 127.6 cm³ (99.0-183.4) and 145.5 cm³ (141.3-148.6) at 1 and 12 months after nephrectomy, respectively. We did not observe significant compensatory hypertrophy in the preserved kidneys of elderly donors postoperatively. Both the mean PI and RI values of elderly donors increased progressively after nephrectomy. No compensatory hypertrophy occurred in the preserved kidneys of elderly donors, although the PI and RI did increase in these donors. Conclusion Our results indicate that nephrectomy caused nephrosclerosis in the preserved kidneys of elderly donors and that prevention of hypertension may be important after nephrectomy in elderly donors.

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Abdominal Aortic Calcification in Living Kidney Donors.
Yoon Y.E., Han W.K., Lee H.H., Chang M.-Y., Huh K.H., Jung D.C., Kim Y.S., Oh Y.T.

Embase
Transplantation Proceedings. 48 (3) (pp 720-724), 2016. Date of Publication: 01 Apr 2016.
[Article]
AN: 610517489

Objective This study assesses the association between abdominal aortic calcification (AAC) and renal function of living kidney donors and evaluate AAC as a surrogate marker for nephrosclerosis. Methods Between January 2010 and March 2013, 287 donors who underwent living donor nephrectomy were enrolled. We analyzed computed tomography angiographies and quantified AAC scores by calculating the Agatston score for the abdominal aorta. The donors were stratified into the non-AAC group (AAC score = 0; n = 238) and the AAC group (AAC score >0; n = 49). The relationship between AAC and perioperative estimated glomerular filtration rate was analyzed. For the 180 donors consenting to implantation biopsy, the nephrosclerosis score was defined as the sum of abnormalities, including glomerulosclerosis, tubular atrophy, interstitial fibrosis, and arteriosclerosis. Results The mean AAC score was 185.5 +/- 263.3 in the AAC group. The AAC group was older than the non-AAC group (51.1 +/- 6.1 vs 37.9 +/- 11 years; P < .001). Perioperative renal function was not different between the 2 groups. However, among the AAC group, donors with an AAC score of >100 were associated with delayed renal function recovery (P = .035). Donors with AAC were more likely to have glomerulosclerosis (50.0% vs 29.1%; P = .022), tubular atrophy (62.5% vs 33.1%; P = .002), and a higher nephrosclerosis score (P = .002). Conclusions Living donors with an AAC score of >100 require close observation because they have a higher probability of delayed renal function recovery after donation. AAC is associated with nephrosclerosis in healthy adults.

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Outcome of Living Donor Transplant Kidneys with Multiple Arteries.
Embase
Transplantation Proceedings. 48 (3) (pp 848-851), 2016. Date of Publication: 01 Apr 2016.
[Article]
AN: 610517445

Background Living donor transplantation (LDT) using kidneys with multiple arteries (MA) has previously been reported to be associated with increased complications and poorer outcomes in recipients. The objective of this study was to investigate outcomes of LDT with MA at the National University Hospital of Singapore, an institution with modest kidney transplant volumes. Methods From 2007 to 2014, a total of 109 consecutive living donor kidney transplantations were performed. Of the nephrectomies, 91% were left sided. A total of 19 cases involved MA, of which 7 with small polar vessels (<2 mm) were ligated and 12 were revascularized. Baseline characteristics and outcomes were comparable between donor-recipient pairs with MA and single artery (SA). Both groups had equivalent induction and maintenance immunosuppressive regimens. Results Mean warm ischemia time (minutes) was similar for kidneys with MA and SA (4.3 +/- 3.2 vs 3.9 +/- 3.2, P = .38). Operative time (minutes) in the recipients was also equivalent (P > .05) for MA and SA (158 +/- 39.2 and 145 +/- 57.2, respectively). The MA kidney recipients had a lower estimated glomerular filtration rate (eGFR) on postoperative day 5 compared to SA (56.6 +/- 24.2 vs 74.1 +/- 35.9 mL/min/1.73 m2, P = .058). However, eGFR at 1 year was the similar for both groups (64.9 +/- 16.2 vs 66.4 +/- 18.1 mL/min/1.73 m2, respectively, P = .76).
Delayed graft function rates were 5.6% and 6.6% for MA and SA, respectively (P = .9). There were no surgical complications for LDT recipients within the MA group. Patient and graft survival was 100% in the MA group compared with 98% in the SA group (P > .05). Conclusions With current surgical techniques, LDT with MA can achieve equally good functional outcomes at 1 year as SA kidneys, with minimal surgical complications.

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267.

Transplantation Proceedings. 48 (3) (pp 710-715), 2016. Date of Publication: 01 Apr 2016.

Introduction The risk of complications and transplant renal function increases in multiple arterial renal transplantations compared with single arterial renal transplantations. Even when multiple arteries are involved, with the introduction of laparoscopic nephrectomy, I mainly choose the left side kidney. Therefore, the number of renal artery reconstructions is increasing, and
simultaneous imaging of arterial rebuilding during the donor nephrectomy is important. Material
Between 2006 and 2015, we performed 132 living donor kidney transplantations at our center and
analyzed 32 cases that were diagnosed pre- and intraoperatively. Method We compared the
single renal artery (SRA) and multiple renal arteries (MRA) groups and analyzed the number of
renal arteries, reconstruction methods, donor and recipient ages, sex, total ischemic times, and 1-
month serum creatinine values. Result In the MRA and SRA groups, the average recipient age
was 52.3 and 47.0 years, respectively, while the average donor age was 52.9 and 53.1 years,
respectively. In SRA and MRA groups, total ischemic time (TIT) was 96.1 and 143.6 min (P <.01).
Serum creatinine level 1 month post-transplantation was 1.54 and 1.25, respectively (P <.001).
Here we experienced 12 cases of living renal donor nephrectomy with multiple vessels in which
the vascular supply territory was first assessed in April 2013 using an intraoperative near-infrared
fluorescence camera system. In addition, regarding TIT, it is possible to shorten surgery by using
individual anastomosis and ligation. Conclusion By managing multiple donors; arteries by
nephrectomy, it is possible to improve kidney transplantation results.

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268.
Impact of Pretransplant Panel-Reactive Antibody Level on Renal Graft Survival in Patients with a Negative Crossmatch and No Donor-Specific Antibody.


Embase
Transplantation Proceedings. 48 (3) (pp 770-772), 2016. Date of Publication: 01 Apr 2016.

[Article]
AN: 610517363

Background Patients with high panel-reactive antibody (PRA) levels before transplantation tend to remain on the waiting list longer when considering cadaveric donor transplantation and have worse outcomes than those with lower PRA levels. This study investigated the impact of the pretransplantation PRA level on rejection and graft survival after kidney transplantation in patients with a negative crossmatch (CXM-) and no donor-specific antibody (DSA-).

Methods We retrospectively analyzed 513 recipients of kidney allograft treated from January 2009 to April 2013. Those who tested positive on crossmatching, had donor-specific antibodies, were ABO incompatible, or had no PRA level data were excluded (n = 130). The remaining patients were stratified into 3 groups according to their PRA levels: group I, PRA = 0 (314 [80.1%]); group II, PRA <= 50% (27 [7.2%]); and group III, PRA > 50% (27 [7.2%]). Graft failure was defined as a return to dialysis, transplant nephrectomy, or death with a functioning kidney.

Results The mean patient follow-up was 30.4 +/- 4.6 months. The rejection rate was 20.1% (group I, 18.5% [n = 58] vs group II, 23.8% [n = 10] vs group III, 33.3% [n = 9] [P = .053]). The graft failure rate was 21.7% (group I, 6.4% [n = 20] vs group II, 7.1% [n = 3] vs group III, 7.4% [n = 7] [P = .792]), and the 3-year graft survival rates were 96.3, 92.4, and 92.5%, respectively (P = .851).

Conclusions The pretransplant PRA level was not significantly associated with graft survival in patients with CXM- and DSA-. However, the rejection rate tended toward significance as the PRA level increased (P = .053).

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Non-alcoholic fatty liver disease (NAFLD) is the most common cause of chronic liver disease in developed countries and it is now considered a risk factor for cardiovascular disease. Evidence linking NAFLD to the development and progression of chronic kidney disease (CKD) is emerging as a popular area of scientific interest. The rise in simultaneous liver-kidney transplantation as well as the significant cost associated with the presence of chronic kidney disease in the NAFLD population make this entity a worthwhile target for screening and therapeutic intervention. While several cross-sectional and case control studies have been published to substantiate these theories, very little data exists on the underlying cause of NAFLD and CKD. In this review, we will discuss the most recent publications on the diagnosis of NAFLD as well new evidence regarding the pathophysiology of NAFLD and CKD as an inflammatory disorder. These mechanisms include the role of obesity, the renin-angiotensin system, and dysregulation of fructose metabolism and lipogenesis in the development of both disorders. Further investigation of these pathways may
lead to novel therapies that aim to target the NAFLD and CKD. However, more prospective studies that include information on both renal and liver histology will be necessary in order to understand the relationship between these diseases.

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Access to transplantation and transplant outcome measures (ATTOM): Study protocol of a UK wide, in-depth, prospective cohort analysis.


Embase BMJ Open. 6 (2) (no pagination), 2016. Article Number: e010377. Date of Publication: 2016. [Article]

AN: 608883173

Introduction: There is significant intercentre variability in access to renal transplantation in the UK due to poorly understood factors. The overarching aims of this study are to improve equity of access to kidney and kidney-pancreas transplantation across the UK and to optimise organ
allocation to maximise the benefit and cost-effectiveness of transplantation. Methods and analysis: 6844 patients aged 18-75 years starting dialysis and/or receiving a transplant together with matched patients active on the transplant list from all 72 UK renal units were recruited between November 2011 and March 2013 and will be followed for at least 3 years. The outcomes of interest include patient survival, access to the transplant list, receipt of a transplant, patient-reported outcome measures (PROMs) including quality of life, treatment satisfaction, well-being and health status on different forms of renal replacement therapy. Sociodemographic and clinical data were prospectively collected from case notes and from interviews with patients and local clinical teams. Qualitative process exploration with clinical staff will help identify unit-specific factors that influence access to renal transplantation. A health economic analysis will explore costs and outcomes associated with alternative approaches to organ allocation. The study will deliver: (1) an understanding of patient and unit-specific factors influencing access to renal transplantation in the UK, informing potential changes to practices and policies to optimise outcomes and reduce intercentre variability; (2) a patient-survival probability model to standardise access to the renal transplant list and (3) an understanding of PROMs and health economic impact of kidney and kidney-pancreas transplantation to inform the development of a more sophisticated and fairer organ allocation algorithm. Ethics and dissemination: The protocol has been independently peer reviewed by National Institute for Health Research (NIHR) and approved by the East of England Research Ethics Committee. The results will be published in peer-reviewed journals and presented at conferences.

PMID

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Identification of molecular markers of delayed graft function based on the regulation of biological ageing.


Embase


Introduction: Delayed graft function is a prevalent clinical problem in renal transplantation for which there is no objective system to predict occurrence in advance. It can result in a significant increase in the necessity for hospitalisation post-transplant and is a significant risk factor for other post-transplant complications. Methodology: The importance of microRNAs (miRNAs), a specific subclass of small RNA, have been clearly demonstrated to influence many pathways in health and disease. To investigate the influence of miRNAs on renal allograft performance post-transplant, the expression of a panel of miRNAs in pre-transplant renal biopsies was measured using qPCR. Expression was then related to clinical parameters and outcomes in two
independent renal transplant cohorts. Results: Here we demonstrate, in two independent cohorts of pre-implantation human renal allograft biopsies, that a novel pre-transplant renal performance scoring system (GRPSS), can determine the occurrence of DGF with a high sensitivity (>90%) and specificity (>60%) for donor allografts pre-transplant, using just three senescence associated microRNAs combined with donor age and type of organ donation. Conclusion: These results demonstrate a relationship between pre-transplant microRNA expression levels, cellular biological ageing pathways and clinical outcomes for renal transplantation. They provide for a simple, rapid quantitative molecular pre-transplant assay to determine post-transplant allograft function and scope for future intervention. Furthermore, these results demonstrate the involvement of senescence pathways in ischaemic injury during the organ transplantation process and an indication of accelerated bio-ageing as a consequence of both warm and cold ischaemia.

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BMJ Open. 6 (4) (no pagination), 2016. Article Number: e010594. Date of Publication: 2016. [Article]
AN: 610190342

Introduction: Informed consent is mandatory for all (surgical) procedures, but it is even more important when it comes to living kidney donors undergoing surgery for the benefit of others. Donor education, leading to informed consent, needs to be carried out according to certain standards. Informed consent procedures for live donor nephrectomy vary per centre, and even per individual healthcare professional. The basis for a standardised, uniform surgical informed consent procedure for live donor nephrectomy can be created by assessing what information donors need to hear to prepare them for the operation and convalescence. Methods and analysis: The PRINCE (Process of Informed Consent Evaluation) project is a prospective, multicentre cohort study, to be carried out in all eight Dutch kidney transplant centres. Donor knowledge of the procedure and postoperative course will be evaluated by means of pop quizzes. A baseline cohort (prior to receiving any information from a member of the transplant team in one of the transplant centres) will be compared with a control group, the members of which receive the pop quiz on the day of admission for donor nephrectomy. Donor satisfaction will be evaluated for all
donors who completed the admission pop-quiz. The primary end point is donor knowledge. In addition, those elements that have to be included in the standardized format informed consent procedure will be identified. Secondary end points are donor satisfaction, current informed consent practices in the different centres (eg, how many visits, which personnel, what kind of information is disclosed, in which format, etc) and correlation of donor knowledge with surgeons' estimation thereof. Ethics and dissemination: Approval for this study was obtained from the medical ethical committee of the Erasmus MC, University Medical Center, Rotterdam, on 18 February 2015. Secondary approval has been obtained from the local ethics committees in six participating centres. Approval in the last centre has been sought. Results: Outcome will be published in a scientific journal.

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Levosimendan use increases cardiac performance after coronary artery bypass grafting in end-stage renal disease patients.

Atalay H., Temizturk Z., Altinsoy H.B., Azboy D., Colak S., Atalay A., Dogan O.F.

Embase


[Article]

AN: 614822424

Background: The effect of levosimendan on myocardial performance has not been studied in dialysis-dependent endstage renal disease patients who have undergone coronary artery bypass grafting (CABG) surgery. Our aim was to investigate the effect of levosimendan on postoperative hemodynamic effects in end-stage renal disease patients undergoing CABG operation. Methods: We performed 58 elective isolated CABG operations in end-stage renal disease patients. The study group received levosimendan at a slow bolus dose of 3 mug/kg, followed by a 24-hour infusion of 0.03-0.05 mug/kg/kg/min. (study group [SG]: n = 25). The remaining patients received a placebo (control group [CG]: n = 33). The mean left ventricular ejection fraction of both groups was similar (44.6 +/- 55.4% versus 42.8 +/- 53.9%). Hemodynamic data were collected at the end, at 1 hour after CPB, and thereafter at 6, 12, and 24 hours in the ICU. Preoperatively, at the end of the operation, at 1 hour after CPB, and thereafter at 6, 12, and 24 hours in the ICU, blood samples from the peripheral vein were collected for cardiac troponin-I (c-TnI) and lactate levels. Norepinephrine if needed started during the rewarming period in both groups. Results: One patient in SG (4%) and 4 patients (12.1%) in CG died postoperatively (P < .01). Cardiac output and cardiac index values did not change early after weaning from extracorporeal circulation, and they were nearly similar during the next 6 hours in both groups. In SG, cardiac output and cardiac index significantly improved at 6 hours, and were stable at the end of 24 hours (P < .001). Hemodynamic parameters were nearly similar after the operation, and did not change significantly at the end of 24 hours in CG. Hemodynamic improvement caused a significant reduction in systemic and pulmonary artery vascular resistance index in SG (P < .002). Pulmonary capillary wedge pressure decreased significantly in SG (P < .034). Cumulative inotrope dose requirement and intraaortic balloon pump use were significantly lower in SG. In addition, blood lactate and cTnI levels were significantly lower in SG (P < .044). Conclusion: No important adverse effect was detected during levosimendan infusion. Because levosimendan at a
dose of 0.03-0.05 mug/kg/min increased myocardial performance significantly in the postoperative period, it can be used safely in end-stage renal disease patients undergoing isolated CABG. The requirement of vasopressors were lower in SG. Copyright © 2016, Carden Jennings Publishing Co. Ltd. All rights reserved.

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274.

Treatment of IgA nephropathy.

Pozzi C.

Embase

Journal of Nephrology. 29 (1) (pp 21-25), 2016. Date of Publication: 01 Feb 2016.
The therapy of IgA nephropathy (IgAN) is cause for debate among nephrologists. Since the early 1980s, many therapeutic attempts have been proposed, but most of them did not prove efficacy. The recent KDIGO Clinical Practice Guideline for Glomerulonephritis recommend long-term ACE-I or ARB treatment when proteinuria is more than 1 g/day, with up-titration of the drug. For patients with GFR >50 ml/min and proteinuria persistently higher than 1 g/day, they suggest a 6-month course of corticosteroid therapy. Based on our experience and the results of the literature, we propose a progressive treatment, which takes into account the time the IgAN is recognized and the clinical conditions present at that time. The treatment can be summarize as follows: (1) in patients with macro-microscopic haematuria, in case with proteinuria less than 0.3 g/day, only annual controls; (2) in patients with proteinuria between 0.3 and 0.9 g/day, ACE-I and/or ARB, with titration of the drugs; (3) in patients with proteinuria higher than 1 g/day, in case with the presence of arterial hypertension and GFR up to 30 ml/min, 6 months course of corticosteroids, in addition to ACE-I and/or ARB; (4) in patients with GFR less than 30 ml/min, ACE-I/ARB, dialysis and kidney transplantation; corticosteroids should be in case considered for patients with persistently high or increasing proteinuria; (5) the immunosuppressants (cyclophosphamide and azathioprine) should be reserved for patients with progressive renal insufficiency or with vasculitic lesions on renal biopsy. Copyright © 2015, Italian Society of Nephrology.


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Comparison of Short-term Outcomes after Laparoscopic Versus Open Hartmann Reversal: A Case-matched Study.
Onder A., Gorgun E., Costedio M., Kessler H., Stocchi L., Benlice C., Remzi F.

Surgical Laparoscopy, Endoscopy and Percutaneous Techniques. 26 (4) (pp e75-e79), 2016.
Date of Publication: 01 Aug 2016.

Purpose: The aim of this study is to compare short-term outcomes of laparoscopic versus open Hartmann reversal. Materials and Methods: Patients who underwent Hartmann reversal between January 2005 and September 2014 were identified and matched for age, sex, body mass index, American Society of Anesthesiologists score, and creation of diverting ileostomy to open counterparts. Patient characteristics and postoperative outcomes (30 d) were evaluated. Results: Eighteen patients with laparoscopic Hartmann reversal were matched to 18 open patients. There were no differences between laparoscopic versus open groups in terms of operative time (157.7+/−52.2 vs. 151.5+/−49.3 min, P>0.05) or overall complication rates [6 (33.3%) vs. 6 (33.3%) (P>0.05)]. No anastomotic leaks or mortality occurred in either group. However, the laparoscopic group was associated with significantly decreased estimated blood loss (114+/−103 vs. 217+/−125 mL, P<0.05), faster return of bowel function (3.2+/−0.6 vs. 4+/−0.6 d, P<0.05), and reduced hospital stay (5.4+/−3.1 vs. 8.3+/−4.8 d, P<0.05). Conclusions: Laparoscopic Hartmann reversal can be safely performed with better short-term outcomes in carefully selected patients.

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Meta-Analysis of Anticoagulation Use, Stroke, Thromboembolism, Bleeding, and Mortality in Patients with Atrial Fibrillation on Dialysis.
Embase
American Journal of Cardiology. 117 (12) (pp 1934-1941), 2016. Date of Publication: 15 Jun 2016.
[Article]
AN: 610571142
Atrial fibrillation (AF) is common in patients on dialysis. Although randomized trials of anticoagulation for AF have demonstrated striking reductions in stroke, these trials did not recruit patients on dialysis. We thus undertook this systematic review and meta-analysis of observational studies including patients with AF on dialysis that reported associations of anticoagulation use. Twenty studies involving 529,741 subjects and 31,321 patients with AF on dialysis were identified. Anticoagulation was associated with a 45% (95% CI 13% to 88%) increased risk of any stroke, reflecting a nonsignificant 13% (95% CI -4% to 34%) increased ischemic stroke risk and 38% (95% CI 3% to 85%) increased hemorrhagic stroke risk. There was also a 44% (95% CI 38% to 56%) lower risk of any thromboembolism, and a 31% (95% CI 12% to 53%) increased risk of any bleeding but no clear association with cardiovascular death (relative risk 0.99, 95% CI 0.86 to 1.15) or all-cause mortality (relative risk 0.97, 95% CI 0.90 to 1.04). Incident event rates were similar or worse in patients on anticoagulation. In conclusion, these observational analyses provide little supporting evidence of benefit, and instead suggest harm, from anticoagulation in patients on dialysis with AF. These results raise the possibility that the effects of anticoagulation in patients with AF on dialysis may not be similar to the clear benefit of anticoagulation seen in patients with AF without end-stage renal disease. Randomized trials are required to definitively evaluate the safety and efficacy of anticoagulation for AF in the dialysis setting. Copyright © 2016 Elsevier Inc.
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277.
Prevention and conservative management of acute kidney injury.
Van Massenhove J., Veys N., Van Biesen W.
Embase
Minerva Urologica e Nefrologica. 68 (1) (pp 58-71), 2016. Date of Publication: February 2016.
[Review]
AN: 610947531
The incidence of acute kidney injury (AKI) is increasing steadily. This can be attributed to a growing prevalence of risk factors for AKI, such as aging, diabetes, underlying cardiovascular disease and the escalating application of more complex procedures. Currently, there is no treatment for established AKI, except for renal replacement therapy in case of life-threatening conditions. The focus should thus be shifted towards AKI prevention rather than treatment.
Several promising pharmacological and non-pharmacological interventions for prevention of AKI in animal models did not fulfill the expectations when applied in humans. There are multiple reasons why these interventions prove to be disappointing. The pathophysiology of AKI in
different settings has not been fully elucidated, the underlying cause of AKI in the clinical setting is often multifactorial, and animal AKI models often do not mimic human AKI very well. Ischemia-reperfusion models are representative for human AKI in the setting of aortic clamping or in case of delayed graft function after kidney transplantation, but are not suited to study AKI in many other conditions such as sepsis. Moreover, several drugs for AKI prevention are associated with deleterious adverse events in humans as they lack selectivity. In this review, an overview of the strategies that can be used in the clinical setting for AKI prevention will be presented. Potential preventive strategies in certain specific clinical conditions will also be reviewed. Copyright © 2016 Edizioni Minerva Medica.

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278.
The emerging role of coagulation proteases in kidney disease.
Madhusudhan T., Kerlin B.A., Isermann B.
Embase
[Review]
AN: 607039527
A role of coagulation proteases in kidney disease beyond their function in normal haemostasis and thrombosis has long been suspected, and studies performed in the past 15 years have provided novel insights into the mechanisms involved. The expression of protease-activated receptors (PARs) in renal cells provides a molecular link between coagulation proteases and
renal cell function and revitalizes research evaluating the role of haemostasis regulators in renal disease. Renal cell-specific expression and activity of coagulation proteases, their regulators and their receptors are dynamically altered during disease processes. Furthermore, renal inflammation and tissue remodelling are not only associated, but are causally linked with altered coagulation activation and protease-dependent signalling. Intriguingly, coagulation proteases signal through more than one receptor or induce formation of receptor complexes in a cell-specific manner, emphasizing context specificity. Understanding these cell-specific signalosomes and their regulation in kidney disease is crucial to unravelling the pathophysiological relevance of coagulation regulators in renal disease. In addition, the clinical availability of small molecule targeted anticoagulants as well as the development of PAR antagonists increases the need for in-depth knowledge of the mechanisms through which coagulation proteases might regulate renal physiology. Copyright © 2016 Macmillan Publishers Limited. All rights reserved.

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2016

279.
Trends and outcomes in right vs. left living donor nephrectomy: An analysis of the OPTN/UNOS database of donor and recipient outcomes - should we be doing more right-sided nephrectomies?.

Page 385
Background: Discussion continues about right vs. left donor nephrectomy (LDN). Left side is preferred due to longer renal vein while right side has been associated with renal vein thrombosis and shorter vessels. Methods: A retrospective analysis of UNOS database for adult living donor transplants between 1 January 2000 and 31 December 2009. Results: We identified 58 599 living donor transplants, of which 86.1% were LDN. There were no significant differences between the recipients or donors demographics. There were higher rates of delayed graft function in right donor nephrectomy (RDN) recipients with a hazard risk of 1.38 (95% CI 1.24-1.53; p < 0.0001). Primary failure rates were similar. In the RDN group, graft thrombosis as cause of graft failure was statistically higher with a hazard ratio of 1.48 (95% CI 1.18-1.86, p = 0.0004), and graft survival was significantly inferior (p = 0.006 log-rank test). For living donors outcomes, the conversion from laparoscopic to open was higher in the RDN group with an odds ratio of 2.02 (95% CI 1.61-2.52; p < 0.00001). There was no significant difference in vascular complications or re-operation required due to bleeding. Re-operations and re-admissions were higher in the LDN group. Conclusion: There are statistical differences between left and right kidney donor nephrectomies on recipient outcomes, but the difference is extremely small. The choice and laterality should be based on center and surgeon preference and experience. Copyright © 2016 John Wiley & Sons A/S.

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Medical students faced with related and unrelated living kidney donation: a stratified and multicentre study in Spain.


EMBASE

World journal of urology. 34 (12) (pp 1673-1684), 2016. Date of Publication: 01 Dec 2016.

[Article]

AN: 615779275

INTRODUCTION: The attitude of medical students towards living kidney donation (LKD) is of great interest given that they will become promoters of this technique in the near future.

OBJECTIVE: To analyse the attitude of Spanish medical students towards related and unrelated LKD and to determine the factors affecting this attitude.

MATERIALS AND METHODS: Type of study: A sociological, interdisciplinary, multicentre, and observational study.

STUDY POPULATION: Medical students enrolled in Spain (n = 34,000).

SAMPLE SIZE: A sample of 9598 students (99% confidence and precision of +/-1%), stratified by geographical area and academic year. Measurement instrument: A validated questionnaire (PCID-DVR RIOS) was administered and completed anonymously.

RESULTS: There was a completion rate of 95.7% (n = 9275); 93% (n = 8630) were in favour of related LKD, and 30% (n = 2784) were in favour of unrelated LKD. The following factors were associated with this attitude: (1) age (p = 0.008); (2) sex (p < 0.001); (3) year of university degree (p < 0.001); (4) a belief that a transplant might be necessary in the future (p < 0.001); (5) attitude towards deceased organ donation (p < 0.001); (6) a willingness to accept a kidney from a living donor (p < 0.001); (7) attitude towards living liver donation (p < 0.001); (8) a partner's attitude towards donation (p < 0.001); (9) having spoken about the subject with one's family (p < 0.001), or friends (p < 0.001); (10) pro-social behaviour (p < 0.001); (11) the respondent's religious attitude (p < 0.001); and (12) fear of possible mutilation of the body after donation (p < 0.001).
CONCLUSIONS: The attitude of medical students towards LKD is very favourable when it is the related kind of donation, and it is associated with factors of general knowledge about organ donation and transplantation and social interaction and religion.


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Predictors and outcomes of delayed graft function after living-donor kidney transplantation.

Embase
Transplant International. 29 (1) (pp 81-87), 2016. Date of Publication: 01 Jan 2016.
[Article]
AN: 607254065

Delayed graft function (DGF) following deceased donor kidney transplantation is associated with inferior outcomes. Delayed graft function following living-donor kidney transplantation is less common, but its impact on graft survival unknown. We therefore sought to determine risk factors for DGF following living-donor kidney transplantation and DGF's effect on living-donor kidney graft survival. We analyzed living-donor kidney transplants performed between 2000 and 2014 in the UNOS dataset. A total of 64 024 living-donor kidney transplant recipients were identified, 3.6% developed DGF. Cold ischemic time, human leukocyte antigen mismatch, donor age, panel reactive antibody, recipient diabetes, donor and recipient body mass index, recipient race and gender, right nephrectomy, open nephrectomy, dialysis status, ABO incompatibility, and previous transplants were independent predictors of DGF in living-donor kidney transplants. Five-year graft survival among living-donor kidney transplant recipients with DGF was significantly lower
compared with graft survival in those without DGF (65% and 85%, respectively, P < 0.001). DGF more than doubled the risk of subsequent graft failure (hazard ratio = 2.3, 95% confidence interval: 2.1-2.6; P < 0.001). DGF after living-donor kidney transplantation is associated with inferior allograft outcomes. Minimizing modifiable risk factors may improve outcomes in living-donor kidney transplantation. Copyright © 2015 Steunstichting ESOT.

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282.

Extraction Time of Kidneys from Deceased Donors and Impact on Outcomes.
Osband A.J., James N.T., Segev D.L.

Embase
American Journal of Transplantation. 16 (2) (pp 700-703), 2016. Date of Publication: 01 Feb 2016.

[Article]
AN: 606702054

Cold ischemia time (from flush to out-of-ice) and warm ischemia time (from out-of-ice to reperfusion) are known to impact delayed graft function (DGF) rates and long-term allograft
survival following deceased donor kidney transplantation. We propose an additional ischemia time, extraction time, beginning with aortic cross-clamp and perfusion/cooling of the kidneys, and ending with removal of the kidneys and placement on ice on the backtable. During this time the kidneys rewarm, suffering an additional ischemic insult, which may impair transplant function. We measured extraction times of 576 kidneys recovered and transplanted locally between January 2006 and December 2008, then linked to Scientific Registry of Transplant Recipients (SRTR) data for outcomes. Extraction time ranged from 14 to 123 min, with a mean of 44.7 min. In SRTR-adjusted analyses, longer extraction time and DGF were statistically associated (odds ratio [OR] = 1.19 per 5 min beyond 60 min, 95% confidence interval [CI] 1.02-1.39, p = 0.03). Up to 60 min of extraction time, DGF incidence was 27.8%; by 120 min it doubled to nearly 60%. Although not statistically significant (OR = 1.19, 95% CI 0.96-1.49, p = 0.11), primary nonfunction rate also rose dramatically to nearly 20% by 120 min extraction time. Extraction time is a novel and important factor to consider when evaluating a deceased donor kidney offer and when strategizing personnel for kidney recovery. Copyright © 2015 The American Society of Transplantation and the American Society of Transplant Surgeons.

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Pelvic lymphoceles/lymph fistulas are commonly observed after kidney allotransplantation, especially when the kidney is placed in a retroperitoneal position. While the majority are <5 cm in diameter and resolve without intervention, some may continue to enlarge, and cause local or systemic symptoms or graft dysfunction. Among 1662 recipients of both living and deceased donor kidney transplants between January 2003 and July 2014, we found 46 (2.7%) patients with symptomatic lymphoceles requiring intervention. We studied the clinical outcomes and charges for three treatment modalities including open surgical drainage (22), laparoscopic surgical drainage (11), and percutaneous fibrin glue injections into the drained lymphocele cavity (13).

The patient demographics and clinical characteristics were comparable for each treatment group, although maintenance immunosuppressive drugs differed by era. We found fibrin glue injections resulted in significantly lower (p = 0.04) rates of recurrence (1; 7.7%) than either laparoscopic (6; 54%) or open surgical drainage (6; 27.3%). In addition, fibrin glue injections generated significantly (p < 0.001) lower median ($4559) charges compared to either laparoscopic ($26 330) or open surgical drainage ($23 758). Fibrin glue treatment has the advantage of being an outpatient procedure, performed with the patient under local anesthesia, and does not incur the expense of an operative procedure or hospital admission associated with laparoscopic or open surgery.

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PMID
Is the Reluctance for the Implantation of Right Donor Kidneys Justified?


[Article] AN: 615813013

BACKGROUND: The lengths of right renal veins are shorter when compared to their left counterparts. Since the implantation of kidneys with short renal veins is considered more challenging, many surgeons prefer left kidneys for transplantation. Therefore, our hypothesis is that the implantation of right kidneys from living and deceased donors is associated with more technical graft failures as compared to left kidneys.

METHODS: Two consecutive cohorts of adult renal allograft recipients of living (n = 4,372) and deceased (n = 5,346) donor kidneys between January 1, 2000 and January 1, 2013 were analyzed. Data were obtained from the prospectively maintained electronic database of the Dutch Organ Transplant Registry. Technical graft failure was defined as failure of the renal allograft within 10 days after renal transplantation without signs of acute rejection.

RESULTS: In the living donor kidney transplantation cohort, the implantation of right donor kidneys was associated with a higher incidence of technical graft failure (multivariate analysis p = 0.03). For recipients of deceased donor kidneys, the implantation of right kidneys was not significantly associated with technique-related graft failure (multivariate analysis p = 0.16).

CONCLUSIONS: Our data show that the implantation of right kidneys from living donors is associated with a higher incidence of technique-related graft failure as compared to left kidneys.


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Objective The primary objective of this retrospective study was to analyze the early impact of chimney (CG) versus fenestrated grafts (FG) on renal parenchymal vascularization and function.

Methods All consecutive patients with juxta-renal abdominal aortic aneurysm (JR-AAA) treated by endovascular repair from December 2013 to July 2014 at the vascular unit, Pellegrin University Hospital, Bordeaux, France, were included. Serum creatinine (SCr) and estimated glomerular filtration rate (EGFR) were reported at baseline and at J2 for acute kidney injury (AKI) incidence, and at J7 for AKI staging (KDIGO criteria); renal resistive indices (RRI) were reported for renal parenchymal repercussion at J-1, J0, and J1. Results Ten patients were included in the CG group and 25 in the FG group, with 13 and 50 renal target vessels, respectively. Successful target vessel revascularization was achieved in 92.3% and 100.0% of patients. The incidence of AKI (10% and 32%), baseline SCr, and EGFR did not differ significantly. SCr was more elevated in the FG group at J1 (p = .025), J2 (p = .051), and J7 (p = .052), and EGFR was significantly lower from baseline to J1 (p = .015) and J2 (p = .014). RRI did not differ significantly between both groups. RRI augmentation was only noted in the FG group from J-1 to J0 (p = .039) and J-1 to J1 (p = .059). Patients with a KDIGO score <2 versus >=2 showed significantly different RRI at J0 (p = .038) and J1 (p = .007). ROC curve analysis showed that RRI measures could be a predictive factor for AKI at J0 (cutoff = 0.72, sensitivity [Se] = 50%, specificity [Sp] = 86%) and J1 (cutoff =
0.71, Se = 70%, Sp = 84%). Conclusions This study showed no significant difference in terms of RRI, EGFR, and the incidence of AKI or CKD between CG and FG. However, post-operative SCr levels were higher with FG, which was corroborated by comparison between pre- and post-operative RRI. Results are limited by the small sample size, but early repeated measures of RRI could be helpful in alerting the clinician to post-operative renal degradation, allowing better-informed attempts to preserve renal function. Copyright © 2016 European Society for Vascular Surgery. Published by Elsevier Ltd. All rights reserved.


Status EMBASE

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286.

Live Donor Renal Transplant with Simultaneous Bilateral Nephrectomy for Autosomal Dominant Polycystic Kidney Disease Is Feasible and Satisfactory at Long-term Follow-up.

Embase Transplantation. 100 (2) (pp 407-415), 2016. Date of Publication: 01 Feb 2016.
[Article]
Background Timing of bilateral nephrectomy (BN) is controversial in patients with refractory symptoms of autosomal dominant polycystic kidney disease (APKD) in need of a renal transplant.

Methods Adults who underwent live donor renal transplant (LRT) + simultaneous BN (SBN) from August 2003 to 2013 at a single transplant center (n = 66) were retrospectively compared to a matched group of APKD patients who underwent LRT alone (n = 52). All patients received general health and polycystic kidney symptom surveys. Results Simultaneous BN increased operative duration, estimated blood loss, transfusions, intravenous fluid, and hospital length of stay. Most common indications for BN were pain, loss of abdominal domain, and early satiety. There were more intraoperative complications for LRT + SBN (6 vs 0, P = 0.03; 2 vascular, 2 splenic, and 1 liver injury; 1 reexploration to adjust graft positioning). There were no differences in Clavien-Dindo grade I or II (39% vs 25%, P = 0.12) or grade III or IV (7.5% vs 5.7%, P = 1.0) complications during the hospital course. There were no surgery-related mortalities. There were no differences in readmission rates (68% vs 48%, P = 0.19) or readmissions requiring procedures (25% vs. 20%, P = 0.51) over 12 months. One hundred percent of LRT + SBN allografts functioned at longer than 1 year for those available for follow-up. Survey response rate was 40% for LRT-alone and 56% for LRT + SBN. One hundred percent of LRT + SBN survey responders were satisfied with their choice of having BN done simultaneously. Conclusions Excellent outcomes for graft survival, satisfaction, and morbidity suggest that the combined operative approach be preferred for patients with symptomatic APKD to avoid multiple procedures, dialysis, and costs of staged operations. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.

Factors related to deterioration of renal function after singleton delivery in pregnant women with chronic kidney disease.
Fukasawa Y., Makino Y., Ogawa M., Uchida K., Matsui H.

Embase
Taiwanese Journal of Obstetrics and Gynecology. 55 (2) (pp 166-170), 2016. Date of Publication: 01 Apr 2016.
[Article]
AN: 610231670

Objective: This study is designed to evaluate which factors would relate to deterioration of renal function (DRF) after delivery in pregnant women with chronic kidney disease (CKD).

Materials and methods: This study included 156 singleton pregnancies of 139 women with CKD at our institution from 2001 to 2010. DRF was defined as the shift of CKD stage into another more severe stage. The relevant variables were compared between women who had DRF (n = 39) and the controls (n = 117).

Results: The number of transplantation or dialysis cases after delivery was 5.8%. DRF occurred in 25% of the study patients. From a logistic regression model, the factors that influence DRF were the presence of glomerulonephritis [odds ratio (OR) 3.56, 95% confidence interval (CI) 1.18-10.81], significant proteinuria prior to pregnancy (>=3 g/d or 3+ more dipstick; OR 3.43, 95% CI 1.14-10.33), and treatment with antiplatelet agents (OR 0.30, 95% CI 0.09-0.94). Receiver-operating characteristic curve analysis confirmed that the estimated glomerular filtration rate (eGFR) of 75 mL/min/1.73 m2 or more before conception is not a risk factor for DRF after delivery (negative predictive value 0.788).

Conclusion: This was the first report to reveal a clear cutoff value regarding DRF in pregnant woman with CKD. There is an almost 78% risk of developing DRF after delivery in patients showing eGFR of 75 mL/min/1.73 m2 or more before conception.

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Clinical Impact of Surgical Complications in Kidney Transplant Recipients in a Reference Hospital in Salvador, Bahia, Brazil.


Embase
Transplantation Proceedings. 48 (7) (pp 2301-2305), 2016. Date of Publication: 01 Sep 2016. [Article]
AN: 612935458

Background Renal transplantation is the treatment of choice for patients with stage V chronic kidney disease, which does not have contraindications to the procedure and is more cost-effective than dialysis treatments and provides better survival and quality of life. Objective The objective of this study was to evaluate the incidence of postoperative complications in kidney transplant recipients in a reference hospital. Methodology This was a descriptive and retrospective study involving the analysis of patient records during hospitalization and outpatient treatment. We analyzed the demographics, clinical indicators, surgical techniques, and postoperative complications. Results In the analysis of 147 transplantations, there was a higher incidence of transplantation in female recipients, average age of 37 years with a predominance of
cadaveric transplantation. Of all pretransplantation comorbidities, hypertension was the most frequent. The overall incidence of surgical complications was 29.9%, with an incidence of vascular complications of 12.7%, 13.4% of surgical site complications, 8.2% of urologic complications, and 3% of hemorrhagic complications. Discussion Vascular complications are serious complications and are associated with increased risk of graft loss (relative risk, 8.4), particularly arterial thrombosis. Patients with ureteral anastomosis using Lich-Gregoir technique showed lower urologic complications compared with patients with anastomosis by Leadbetter-Politano technique. Conclusion Surgical complications have different clinical effects, depending on their category. The vascular complications are associated with graft lost. Copyright © 2016 Elsevier Inc.


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Publisher Elsevier USA

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289.
Acute Graft Pyelonephritis Occurring up to 30 Days After Kidney Transplantation: Epidemiology, Risk Factors, and Survival.
Kroth L.V., Barreiro F.F., Saitovitch D., Traesel M.A., d'Avila D.O.L., Poli-de-Figueiredo C.E.
Embase
Transplantation Proceedings. 48 (7) (pp 2298-2300), 2016. Date of Publication: 01 Sep 2016.
[Article]
AN: 612935450
Acute graft pyelonephritis is a very common infection in renal transplantation. The impact of acute graft pyelonephritis (AGPN) on graft and patient outcome has not yet been established. Eight hundred seventy kidney and kidney-pancreas transplants were retrospectively studied, over last 13 years, to verify occurrence of AGPN in the first 30 days post-transplantation. We found that 112 patients (15.8%) presented post-transplantation AGPN up to 30 days after a kidney transplantation. The occurrence was higher in older patients (P =.005) and in those with ureteral stents (P = .06). Escherichia coli was the most frequent microorganism in urine cultures (32%). Ureteral stent (relative risk = 1.7; confidence interval [CI], 1.1-2.5; P =.018) was a major risk factor for AGPN as well as older ages (RR = 1.02; CI 1.01-1.04; P =.001), length of hospitalization stay (RR = 1.01; CI, 1.01-1.02; P <.001), and anti-thymocyte globulin (ATG) induction (RR = 1.6; CI, 1.022-2.561; P =.04). Long-term graft and patient survival was significantly lower in patients with pyelonephritis in the first 30 days after transplantation (OR 1.43; 95% CI, 0.95-2.16; P =.024 and OR 1.77; 95% CI, 1.12-2.80; P =.006, respectively). Acute pyelonephritis in the first 30 days after transplantation is therefore associated with a lower long-term graft and patient survival. Copyright © 2016 Elsevier Inc.


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EMBASE

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Publisher
Elsevier USA

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20161107

Year of Publication
2016

290.
Organ Donation and Transplantation From Donors With Systemic Infection: A Single-Center Experience.
Objectives Donors with bacteremia and sepsis are often considered to be controversial for organ retrieval due to potential transmission of an infectious agent to the recipient. Herein we report our initial experience of organ donation and transplantation results from donors with systemic infection. Materials and Methods From January 2013 to December 2014, 125 cases of donation were completed in our organ procurement organization including 90 cases of donation after brain death (DBD) and 35 cases of donation after circulatory death (DCD). The results of bacterial culture of the donor's peripheral venous blood (PVB), blood from central venous catheter (BCVC), urine, bronchial aspiration, and tip of central venous catheter (TCVC; Maki's semiquantitative culture) were retrospectively reviewed. All liver transplant recipients received specific antibiotics according the susceptibility profiles of the PVB cultures, and all kidney transplant recipients received specific antibiotics according the susceptibility profiles of the PVB and urine cultures. Bacterial infection diseases transmission from donors of the liver and kidney transplant recipients were also retrospectively reviewed. Results The positive rates of the bacterial culture of the donor's bronchial aspiration, PVB, BCVC, TCVC, and urine were 46.4% (39/84), 20.2% (24/119), 15.8% (12/76), 11.1% (3/27), and 7.0% (8/115), respectively. Only 28.1% (9/32) of donors with positive cultures of PVB or urine received specific antimicrobial therapy before harvesting. Twenty-two livers and 46 kidneys from donors with systemic infection (positive PVB culture) were transplanted, and no case of bacterial infection diseases transmission occurred in the recipients. Conclusions In the circumstance of donor systemic infection with positive bacterial culture of PVB, the liver and kidney can be transplanted safely with prophylactic antibiotics. Donors with systemic infection are not a contraindication for organ donation. Copyright © 2016 Elsevier Inc.

PMID

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EMBASE

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Publisher
Elsevier USA

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20161107

Embase
Transplantation Proceedings. 48 (5) (pp 1365-1369), 2016. Date of Publication: 01 Jun 2016.

Background During kidney transplantation, the total time of organ ischemia consists of first warm ischemia time (WIT1), cold ischemia time (CIT), and a second WIT (WIT2). Rising graft temperature during WIT2, which comprises the creation of vascular anastomoses, increases oxygen demand and tissue damage, especially in the kidney tubular cells. The aim of this study was to analyze the influence of WIT2 on early and long-term kidney graft function.

Methods We performed a retrospective analysis of 554 consecutive adult recipients, who received their first kidney graft from a deceased donor between 2003 and 2013. Results Mean WIT2 was 25.2 min. Donors' sex, age, presence of hypertension, body mass index (BMI), and the cause of brain death showed no effect on WIT2. Weak positive correlations were found between the duration of WIT2 and both recipients' age (r = 0.11; P < .01) and BMI (r = 0.14; P < .01). Multivariate regression analysis confirmed the independent influence of age (beta = 0.107 [95% confidence interval, 0.017 to 0.197] per year; P = .02) but not BMI (P = .09). WIT2 influenced early graft function and was significantly longer in patients with primary graft nonfunction than in other recipients (35.3 vs 24.9 min; P < .01). According to receiver-operating characteristic curve analysis, a WIT2 value >26 min was predictive of primary graft nonfunction, with 64% specificity and 58% sensitivity. No correlations were found between WIT2 and estimated glomerular filtration rate in the long-term follow-up period.

Conclusions This study found that WIT2 may significantly influence the early graft function. We also found that the creation time of vascular anastomoses does not affect the long-term kidney graft excretory function. Copyright © 2016 Elsevier Inc.

Factors Associated With Delayed Graft Function and Their Influence on Outcomes of Kidney Transplantation.

Salazar Meira F., Zemiacki J., Figueiredo A.E., Viliano Kroth L., Saute Kochhann D., d'Avila D.O., Traesel M., Saitovitch D., Poli-de-Figueiredo C.E.

Embase
Transplantation Proceedings. 48 (7) (pp 2267-2271), 2016. Date of Publication: 01 Sep 2016.
[Article]
AN: 612935325

Background One of the main postoperative complications of kidney transplant is delayed graft function (DGF), which means absence of graft function after transplant or the need for dialysis during the first week post procedure. The occurrence of DGF currently in our hospital is high and has been attributed to a combination of many factors. The aim of this study was to evaluate the factors associated to DGF and their influence in the outcome of kidney transplants. Methods Historical cohort of 150 patients transplanted with live or deceased donor kidneys from 2011 to 2013. Results DGF was associated to time in dialysis and the number of recipient pre-transplant transfusions, donors age, serum creatinine level, use of vasoactive drugs in the donor, distance from place of organ retrieval and transplant center, and duration of cold ischemia time. DGF influenced post-transplantation outcome in regard to length of stay in intensive care, length of
hospital stay, acute rejection episodes, and higher creatinine levels at discharge. Patients and graft survival were shorter in the DGF group. Conclusions There are multiple factors related to DGF, the most important being those related to donors, and organ storage. The most important factor related to the recipient was the dialysis vintage. We did not find a correlation between DGF and HLA-compatibility. DGF consequences are important, including worse graft function and survival, as well as impact in recipient morbidity and mortality. Copyright © 2016 Elsevier Inc.


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293.


AN: 612935040

Surgical complications (SCs) are still high potential causes of graft loss. The incidence has a huge amount of variations depending on many factors. Our aim was to study the postoperative technical complications following kidney transplantations (KTs) during a 5-year period between
2011 and 2015. In the observed time frame there were 47 SCs occurring in 32 (19.4%) patients of 165 KTs. Every complication was classified into 3 groups: vascular (11; 6.6%), urologic (16; 9.7%), and any others (20; 12.1%). The most common postoperative SCs in our center were hemorrhage (14; 8.5%), urinary leakage (12; 7.2%), and renal artery stenosis (6; 3.6%). Twenty-seven patients, 84% of those having had a SC, needed an intervention, mainly a surgical correction (28; 62%). Half of these interventions (21; 51%) were performed due to urologic reasons. As possible predicting factors, we studied the type of arterial and ureter anastomosis in relation to onset of vascular and urologic complications. There was no significant correlation. The same was true for any donor and/or recipient demographic parameters. However, the presence of SCs impaired both patient and graft survival. The cumulative 6-month, 1-, 3-, and 5-year patient survival rates were 97% versus 99%, 93% versus 99%, 84% versus 97%, and 84% versus 97% for patients with/without (w/wo) a SC, respectively (P = .028). The cumulative 6-month, 1-, 3-, and 5-year graft survival rates were 81% versus 96%, 77% versus 94%, 68% versus 86%, and 54% versus 86% for the same 2 groups, respectively (P = .003). Copyright © 2016 Elsevier Inc.

PMD

Status
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Publisher
Elsevier USA

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Year of Publication
2016

294.
Acetylsalicylic Acid Resistance After Simultaneous Pancreas-Kidney Transplantation.
Embase
Background The most common conditions leading to death after simultaneous pancreas-kidney transplantations (SPKs) are cardiovascular diseases. The aim of this study was to test the platelet aggregation inhibitor acetylsalicylic acid (ASA) resistance in patients after SPKs, including investigations into the triggering factors. Methods Thirty-two patients (22 men, 10 women; overall age, 47.4 +/- 8.6 years) were involved in our study and took 100 mg ASA per day. We used optical platelet aggregometry to detect resistance. Results Resistance occurred in 40.6% of the study group. However, with the use of logistic regression analysis, the examined 24 factors did not show any significant correspondence with resistance. Conclusions The incidence of ASA resistance seems to be higher compared with other groups, but the triggering effect is still unproved. Clarifying this question should be important regarding the mortality- and morbidity-reducing capacity of antiplatelet drugs in the management of cardiovascular conditions.

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Embase
[Article]
AN: 613014367

Background We report the incidence and nature of ureteral and surgical complications in our series of 853 consecutive living-donor renal transplants after laparoscopic living-donor nephrectomy. The aim of this study was to analyze the therapeutic approaches to ureteral complications in kidney transplantsations and their relationship with recipient outcome. Methods The medical records of patients who underwent kidney transplantation from 2000 to 2014 were reviewed retrospectively. After the donor nephrectomies were performed with the use of laparoscopic, hand-assisted laparoscopic, and vesico-ureteral anastomosis, the recipient's ureteral complications were classified according to the mechanism and site of urinary tract involvement: anastomosis stricture, anastomosis leakage, vesico-ureteral reflux, and urolithiasis. Results Among the 853 cases of kidney transplantation, ureteral complications occurred in 66 patients (7.73%). The most common complication was urinary tract infection caused by vesico-ureteral reflux (n = 24, 2.81%), which was managed with subureteral polydimethylsiloxane injection. The second most common complication was the anastomosis site stricture (n = 23, 2.69%), which was treated by ureteral re-implantation or percutaneous nephrostomy. Anastomosis site leakage occurred in 11 patients (1.28%) and was managed by percutaneous nephrostomy with double-J stenting and drainage or ureteral re-implantation. Urolithiasis occurred in 8 patients (0.93%). Conclusions There was an 8% rate of recipient ureteral complications at our institution. Of the 66 patients, 46 (5.4%) required surgical repair. The remaining 20 patients with ureteral complications were treated with conservative care or minimally invasive procedures. The keys to successful management of these problems are early diagnosis and prompt reconstruction whenever possible. Most ureteral complications are easily managed with a successful outcome with early intervention. Copyright © 2016 Elsevier Inc.


Status
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Symptomatic Venous Thromboembolism and Major Bleeding After Renal Transplantation: Should We Use Pharmacologic Thromboprophylaxis?.


Background Venous thromboembolism (VTE) is a major health issue that may result in complications such as post-thrombotic syndrome, pulmonary hypertension, and death. Appropriate thromboprophylaxis in individuals undergoing kidney transplantation remains unclear. The aim of this study was to determine the prevalence of symptomatic VTE and major bleeding within 90 days after renal transplantation (RT).

Methods This was a retrospective study on consecutive patients undergoing RT at Hospital Privado Cordoba, Argentina, from January 1, 2006, to December 31, 2013. Exclusion criteria were age <18 years and combined organ transplantation. Pharmacologic or mechanical thromboprophylaxis was not used routinely. Symptomatic VTE and major bleeding were documented. Results A total of 511 RTs were performed; 62 patients received combined organ transplantation, and 8 patients (1.5%) were lost to follow-up. Overall, follow-up was completed on 441 patients, 4 (0.9%) of whom developed deep venous thrombosis and 14 (3%) of whom died. The most frequent causes of death were septic shock and severe hemorrhage. Duration of surgery >4 hours (P = .006) and a history of VTE (P < .001) were associated with VTE. Twenty-three patients (5.2%) had major bleeding, 2 (0.4%) died from bleeding complications, and 17 (3.85%) required a reoperation to control
bleeding. Conclusions This study shows a low prevalence of symptomatic VTE in patients undergoing RT despite not having used thromboprophylaxis routinely. Major bleeding was significant, and despite the high risk of VTE assigned by the Caprini score, which suggests pharmacologic prophylaxis, our data raise questions about the appropriate prophylaxis for these patients. Copyright © 2016 Elsevier Inc.


Status EMBASE

Institution (Musso, Robaina, Figueroa Cordoba, Martini, Albertini, Chiurchiu, Tabares) Servicio de Medicina Interna, Nefrologia y Medicina Vascular, Hospital Privado Universitario Centro Medico de Cordoba, Instituto Universitario de Ciencias Biomedicas de Cordoba (IUCBC), Cordoba, Argentina

Publisher Elsevier USA

Date Created 20161122

Year of Publication 2016

297.

Graft Survival in Patients Who Received Second Allograft, Comparing Those With or Without Previous Failed Allograft Nephrectomy.


Embase

Transplantation Proceedings. 48 (9) (pp 2895-2898), 2016. Date of Publication: 01 Nov 2016.

[Article]

AN: 613790488

Introduction Nowadays, the number of patients receiving a second graft is growing, and the management of failed grafts is still controversial. Objective Our objective was to analyze the
influence of graft nephrectomy on graft and patient survival. Materials and Methods We retrospectively evaluated the demographic features and graft outcomes of 63 recipients who received second allografts between August 1985 and April 2013. They were divided into two groups: group A, those who underwent nephrectomy of failed graft (n = 21, 33.3%), and group B, those whose failed graft was retained (n = 42, 66.6%). chi2 and Mann-Whitney U tests were used to compare demographic characteristics and graft features in both groups. Kaplan-Meier test was used to analyze graft and patient survival. Finally, univariate and multivariate analysis was done using Cox regression. Results Demographic characteristics of donor and receptors were similar in both groups. Overall panel-reactive antibody (P = .040) showed statistically significant differences between groups (72.0 +/- 25.3 in group A and 54.8 +/- 30.0 in group B). Hemodialysis duration was longer in group A (P = .023, 112.2 +/- 72.8 vs 70.9 +/- 66.9 months). The percentage of patients who had delayed graft function was higher in group A (58.8% vs 27.3%, P = .029). Kaplan-Meier test found no differences between groups (P = .344); group A, 107.4 months (95% confidence interval [CI] 74.0 to 140.8) and group B, 82.7 months (95% CI 62.5 to 102.8). We found no differences in terms of patient survival (P = .798) with the Kaplan-Meier test. In group A, patient survival was 164.5 months (CI 137.7 to 191.31) and in group B, 152.0 months (95% CI 125.5 to 178.5). Conclusions Failed graft nephrectomy did not show a negative impact on graft and patient survival. Copyright © 2016 Elsevier Inc.

Status EMBASE
Institution (Sanchez-Gonzalez, Carrasco-Valiente, Arenas-Bonilla, Campos-Hernandez, Blanca-Pedregosa, Ruiz-Garcia, Valero-Rosa, Gomez-Gomez, Salamanca-Bustos, Navarro-Cabello, Requena-Tapia) Department of Urology, Hospital Universitario Reina Sofia-IMIBIC, Cordoba, Spain
Publisher Elsevier USA
Date Created 20161228
Year of Publication 2016
Uremic itch is a frequent and sometimes very tormenting symptom in patients with advanced or end-stage renal failure, with a strong negative impact on the quality of life. According to a representative study, the point prevalence of chronic itch is 25% in hemodialysis patients but may reach more than 50% in single cohorts depending on the country and dialysis efficacy. Not much is known regarding the pathogenesis of uremic itch. Besides parathyroid hormone, histamine, tryptase, and alteration of the calcium-phosphate metabolism have been suspected. More recently, derangements in the opioid system and an inflammatory condition have been investigated as suspected players in the pathogenesis of uremic itch, but remain unproven so far. Treatment of chronic itch in dialysis patients remains difficult. Besides topical application of rehydrating or immunomodulating compounds, such as gamma-linolenic acid or tacrolimus treatment with nalfurafine may be helpful. Apart from that, gabapentin and pregabalin are promising drugs to alleviate uremic itch. In many cases, UVB phototherapy is effective in reducing the intensity of itch. When treating patients, one should take into account that most of the drugs available are not licensed for the treatment of itch. Therefore, a deliberate use of therapeutic options aiming for a good risk-benefit relation should be adopted. In very severe and refractory cases, patients suitable for renal transplantation might be switched to 'high urgency' status, as successful renal transplantation cures uremic pruritus in most of the cases. Copyright © 2016 S. Karger AG, Basel.
Renal transplantation: technical aspects, diagnosis and management of early and late urological complications.

Greco F., Alba S., Formara P., Mirone V.

Embase
Panninerva medica. 58 (4) (pp 294-303), 2016. Date of Publication: 01 Dec 2016.
[Review]
AN: 615598382

INTRODUCTION: Renal transplantation (RT) represents actually the most effective therapy in patients with end-stage renal failure as it is cost effective, allows for a normal life style and reduces the risk of mortality from dialysis related complications. The purpose of the present review is to update the recent published literature regarding the technical aspects, diagnosis and the urological complications associated with renal transplantation. EVIDENCE ACQUISITION: A comprehensive literature review was performed using PubMed and Thomson-Reuters Web of Science between February 2014 and June 2016. Using free-text protocol, the following terms were applied: "chronic kidney failure", "renal transplantation", "robot-assisted surgery", "laparoscopy", "living donor nephrectomy", "surgical techniques", "urological complications".

EVIDENCE SYNTHESIS: RT represents actually the most effective therapy in patients with end-stage renal failure as it is cost effective, allows for a normal life style and reduces the risk of mortality from dialysis related complications. In the last 2 years, an increased number of published studies on the use of robot-assisted surgery for RT has been presented.

CONCLUSIONS: We could expect that in the next future RKT and LDN are both destined to replace open surgery also in a special field as RT.


Institution
(Greco) Department of Urology and Mini-Invasive Surgery, Romolo Hospital, Crotone, Italy - Date Created
20170425
Year of Publication
2016
When Opportunity Knocks Twice: Dual Living Kidney Donation, Autonomy and the Public Interest.

Bailey P., Huxtable R.

Embase

Bioethics. 30 (2) (pp 119-128), 2016. Date of Publication: 01 Feb 2016.

[Article]

AN: 615602221

Living kidney transplantation offers the best treatment in terms of life-expectancy and quality of life for those with end-stage renal disease. The long-term risks of living donor nephrectomy, although real, are very small, with evidence of good medium-term outcomes. Who should be entitled to donate, and in which circumstances, is nevertheless a live question. We explore the ethical dimensions of a request by an individual to donate both of their kidneys during life: 'dual living kidney donation'. Our ethical analysis is tethered to a hypothetical case study in which a father asks to donate a kidney to each of his twin boys. We explore the autonomy of the protagonists, alongside different dimensions of the public interest, such as the need to protect not only the recipients, but also the donor and even the wider community. Whilst acknowledging objections to 'dual-donation', not least by reference to the harms that the donor might be expected to endure, we suggest there is a prima facie case for permitting this, provided that both donor and recipients are willing and that due attention is paid to such considerations as the autonomy and welfare of all parties, as well as to the wider ramifications of acting on such a request. We argue for broader interpretations of the concepts of autonomy and welfare, recognizing the importance of relationships and the relevance of more than merely physical well-being. Equipped with such a holistic assessment, we suggest there is a prima facie case for allowing 'dual living kidney donation'.

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2016
301. Living kidney donation. Bailey P., Edwards A., Courtney A.E. Embase BMJ (Clinical research ed.). 354 (pp i4746), 2016. Date of Publication: 14 Sep 2016. [Review] AN: 615588924 PMID 27629818 [http://www.ncbi.nlm.nih.gov/pubmed/?term=27629818] Institution (Bailey) School of Clinical Sciences, University of Bristol, Bristol BS2 8DZ, UK Southmead Hospital, North Bristol NHS Trust, Bristol BS10 5NB, UK (Edwards) Southmead Hospital, North Bristol NHS Trust, Bristol BS10 5NB, UK (Courtney) Belfast City Hospital, Belfast Health and Social Care Trust, Belfast BT9 7AB, UK Date Created 20170425 Year of Publication 2016

been studied in kidney transplantation. In this single-center retrospective case series, we describe the outcomes of 45 consecutive deceased-donor kidney transplant recipients subjected to a modified ERAS protocol, and we discuss the potential for future developments. Methods Included in the analysis were 45 consecutive deceased-donor kidney transplant recipients from August 2014 to July 2015 in the John Paul II Krakow Specialist Hospital, Krakow, Poland. All patients were subjected to a modified ERAS protocol. The primary outcomes were length of hospital stay and mortality and morbidity rates. A surrogate composite criterion for discharge was ability to attend the transplant clinic weekly with no need for dialysis. The secondary outcome was the rate of unplanned readmissions within the 1st 3 months after transplantation. Results The median hospital stay was 10 days (range, 6-46). There were no deaths or acute coronary or thromboembolic events. Serious complications requiring surgery occurred in 6.6% of recipients. Three-month graft survival was 97.8%. The unplanned readmission rate was 8.9%. Conclusions ERAS protocol is feasible in deceased donor kidney transplantation and renders low morbidity rates and reasonable readmission rate. Further reduction of the length of the hospital stay can be expected with health care system financial policies. Copyright © 2016 Elsevier Inc.
Kidney donation should not lead to deterioration of the donor's health condition, both during the perisurgical period and in the long term. Safety of a living kidney donor becomes a prerequisite for his/her qualification. Detailed diagnostic procedures are performed to exclude any abnormalities of his/her health condition. Additionally, a long-term post-donation follow-up system for kidney donors has been set up in Poland besides the restrictive qualification system. Transplantation centers are obligated to provide a diagnostic procedures for living organ donors as a part of the monitoring of their health condition and to ensure them a medical follow-up for 10 years after the donation. A total of 141 cases of unilateral nephroureterectomy performed in 2003-2014 to obtain a kidney for transplantation were considered. Medical files of post-donation diagnostic or therapeutic methods and their outcomes were retrospectively analyzed. The aim of the study was to assess the efficacy of monitoring of donors' health condition within the framework of the long-term follow-up system for kidney donors in the aspect of detection of the donation-independent abnormalities. Copyright © 2016 Elsevier Inc.
304.

Urinary Tract Infections in Kidney Transplant Recipients Hospitalized at a Transplantation and Nephrology Ward: 1-Year Follow-up.

Gozdowska J., Czerwinska M., Chabros L., Mlynarczyk G., Kwiatkowski A., Chmura A., Durlik M.

Embase

Transplantation Proceedings. 48 (5) (pp 1580-1589), 2016. Date of Publication: 01 Jun 2016.

[Article]

AN: 612748979

Introduction The aim of this study was to investigate risk factors for urinary tract infections (UTI), the causative organisms of UTI and also their management and treatment. In addition, we evaluated the effects of UTI on renal graft function. Methods This analysis included 107 kidney transplant recipients (64% women) with a diagnosis of UTIs confirmed by positive results on urine culture. Type of pathogens, sensitivity to drugs, risk factors for infection, incidence of urosepsis, hospitalization period, treatment methods, and recurrence rates were analyzed. Statistical analysis was performed by using Pearson's chi² test, Yates' chi² test, the Student t test, Welch's t test, the Mann-Whitney U test, Fisher's exact test, and the Shapiro-Wilk normality test. Results The most common species isolated from urine samples included Escherichia coli (42%), Klebsiella pneumoniae (15%), and Enterococcus faecalis (10%). The percentage of multidrug-resistant strains was 31%, and urosepsis was diagnosed in 16% of patients. Recurrences developed in 76% of infected patients. Bricker ureterointestinal anastomosis was performed in 11% of patients. Risk factors for severe infections included: pre-transplantation urinary tract surgery (P = .02), double-J stent insertion (more common in men) during KTx (N = 34; 32%), (P = .021), reoperations following transplantation (P = .36), elevated tacrolimus levels at the time of infection (P = .024). Severe infections were diagnosed in patients with lower eGFRs, were associated with a need for longer hospitalization (P = .04) and escalation of antibacterial treatment. Carbapenems were used in 22 patients (20.5%). Conclusions UTIs were more common in women, in patients with impaired function of the kidney transplant, and in those with a history of urinary tract interventions. Severe infections were associated with a risk of urosepsis,
Challenges in treatment and diagnosis of forgotten/encrusted double-J ureteral stents: the largest single-center experience.
Adanur S., Ozkaya F.

Purpose: We aimed to evaluate the effectiveness of the endourologic management of forgotten and/or encrusted ureteral stents together with our single-center experience. Materials and methods: Fifty-four patients with forgotten double-J ureteral stents were treated in our center between January 2008 and March 2014. Encrustation and the related stone burdens were estimated by using computerized tomography and kidney-ureter-bladder radiography. The management method was chosen based on the stone burden or clinical and radiological findings.
Results: Fifty-four patients, 39 males and 15 females, were included in the study. The average age of the patients was 38.2 +/- 25.06 (2-86) years. The average indwelling time of the ureteral stents was 22.6 +/- 30.3 (6-144) months. Six of the patients with forgotten stents had solitary kidneys. The double-J stent (DJS) was fragmented in four (7.4%) patients. A urinary system infection was present in 15 (27.7%) of the patients. The ureteral stents and related stones were successfully removed without any complications by combined endourologic techniques to achieve a stone-free state in all patients except for patient with 110 months of forgotten stent time in whom nephrectomy was performed for a nonfunctioning kidney related to the forgotten stent.

Conclusions: Forgotten/encrusted DJS may lead to complications in a range of urinary system infections, up to a loss of renal function. They can be safely and successfully removed, and the renal function can be preserved by endourologic techniques, starting with the least invasive procedures in centers highly experienced. Copyright © 2016 Informa UK Limited, trading as Taylor & Francis Group.


Status EMBASE
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Year of Publication 2016
Background Many surgical procedures can produce persistent lymphorrhea, lymphoceles, and lymphedema after lymph node and lymph vessel damage. Appropriate visualization of the lymphatic system is challenging. Indocyanine green (ICG) is a well-known nontoxic dye for lymphatic flow evaluation. ICG fluorescence-guided lymphography has emerged as a promising technique for intraoperative lymphatic mapping. Objective Our goal was to develop a high spatial resolution, real-time intraoperative imaging technique to avoid or recognize early deep lymphatic vessel damage. Methods We intraoperatively performed ICG fluorescence-guided lymphography during a kidney transplant. ICG was injected in the subcutaneous tissue of the patient's groin in the Scarpa's triangle. A dedicated laparoscopic high-definition camera system was used. Results Soon after ICG injection, the lymphatic vessels were identified in the abdominal retroperitoneal compartment as fluorescent linear structures running side by side to the iliac vessels. Surgical dissection was therefore performed, avoiding iatrogenic damage to major lymphatic structures. Another ICG injection at the end of the procedure confirmed that the lymphatic vessels were intact without lymph spread. Conclusions Intraoperative lymphatic mapping with an ICG fluorescence-sensitive camera system is a safe and feasible procedure. ICG real-time fluorescence lymphography can be used to avoid or recognize early deep lymphatic vessel damage and reduce postoperative complications related to the lymphatic system. Copyright © 2016 Elsevier Inc.


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Year of Publication 2016
Transplantation of kidneys with tumors.
Frasca G.M., D'Errico A., Malvi D., Porta C., Cosmai L., Santoni M., Sandrini S., Salviani C., Gallieni M., Balestra E.

Embase
Journal of Nephrology. 29 (2) (pp 163-168), 2016. Date of Publication: 01 Apr 2016.
[Review]
AN: 609077405
The shortage of donors in the face of the increasing number of patients wait-listed for renal transplantation has prompted several strategies including the use of kidneys with a tumor, whether found by chance on harvesting from a deceased donor or intentionally removed from a living donor and transplanted after excision of the lesion. Current evidence suggests that a solitary well-differentiated renal cell carcinoma, Fuhrman nuclear grade I-II, less than 1 cm in diameter and resected before grafting may be considered at minimal risk of recurrence in the recipient who, however, should be informed of the possible risk and consent to receive such a graft.

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Publisher
308.
Sigmoid resection with primary anastomosis and ileostomy versus laparoscopic lavage in purulent peritonitis from perforated diverticulitis: outcome analysis in a prospective cohort of 40 consecutive patients.
Catry J., Brouquet A., Peschaud F., Vychnevskaiia K., Abdalla S., Malafosse R., Lambert B., Costaglioli B., Benoist S., Penna C.
Embase
International Journal of Colorectal Disease. 31 (10) (pp 1693-1699), 2016. Date of Publication: 01 Oct 2016.
[Article]
AN: 612098073
Purpose: This prospective study aimed to compare outcomes after laparoscopic peritoneal lavage (LPL) and sigmoid resection with primary colorectal anastomosis (RPA). Methods: From June 2010 to June 2015, 40 patients presenting with Hinchey III peritonitis from perforated diverticulitis underwent LPL or RPA. Patients with Hinchey II or IV peritonitis and patients who underwent an upfront Hartmann procedure were excluded. Primary endpoint was overall 30-day or in-hospital postoperative morbidity after surgical treatment of peritonitis. Results: Twenty-five patients underwent RPA and 15 LPL. Overall postoperative morbidity and mortality rates were not significantly different after RPA and LPL (40 vs 67 %, p = 0.19; 4 vs 6.7 %, p = 1, respectively). Intra-abdominal morbidity and reoperation rates were significantly higher after LPL compared to RPA (53 vs 12 %, p < 0.01; 40 vs 4 %, p = 0.02, respectively). Multivariate analysis showed that LPL (p = 0.028, HR = 18.936, CI 95 % = 1.369-261.886) was associated with an increased risk of postoperative intra-abdominal septic morbidity. Among 6 patients who underwent reoperation after LPL, 4 had a Hartmann procedure. All surviving patients who had a procedure requiring stoma creation underwent stoma reversal after a median delay of 92 days after LPL and 72 days after RPA (p = 0.07). Conclusion: LPL for perforated diverticulitis is associated with a high risk of inadequate intra-abdominal sepsis control requiring a Hartmann procedure in up to 25 % of
patients. RPA appears to be safer and more effective. It may represent the best option in this context. Copyright © 2016, Springer-Verlag Berlin Heidelberg.


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309.
Multiplexed color-coded probe-based gene expression assessment for clinical molecular diagnostics in formalin-fixed paraffin-embedded human renal allograft tissue.
Adam B., Afzali B., Dominy K.M., Chapman E., Gill R., Hidalgo L.G., Roufosse C., Sis B., Mengel M.

Embase
Clinical Transplantation. 30 (3) (pp 295-305), 2016. Date of Publication: 01 Mar 2016.
[Article]
AN: 608598610

Histopathologic diagnoses in transplantation can be improved with molecular testing. Preferably, molecular diagnostics should fit into standard-of-care workflows for transplant biopsies, that is, formalin-fixed paraffin-embedded (FFPE) processing. The NanoString gene expression platform has recently been shown to work with FFPE samples. We aimed to evaluate its methodological
robustness and feasibility for gene expression studies in human FFPE renal allograft samples. A literature-derived antibody-mediated rejection (ABMR) 34-gene set, comprised of endothelial, NK cell, and inflammation transcripts, was analyzed in different retrospective biopsy cohorts and showed potential to molecularly discriminate ABMR cases, including FFPE samples. NanoString results were reproducible across a range of RNA input quantities \( r = 0.998 \), with different operators \( r = 0.998 \), and between different reagent lots \( r = 0.983 \). There was moderate correlation between NanoString with FFPE tissue and quantitative reverse transcription polymerase chain reaction (qRT-PCR) with corresponding dedicated fresh-stabilized tissue \( r = 0.487 \). Better overall correlation with histology was observed with NanoString \( r = 0.354 \) than with qRT-PCR \( r = 0.146 \). Our results demonstrate the feasibility of multiplexed gene expression quantification from FFPE renal allograft tissue. This represents a method for prospective and retrospective validation of molecular diagnostics and its adoption in clinical transplantation pathology. Copyright © 2016 John Wiley & Sons A/S.

PMID

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310.

Internal or External Stenting of the Ureterovesical Anastomosis in Renal Transplantation.
Background: Stenting of the ureterovesical anastomosis reduces the incidence of urological complications (UCs) after renal transplantation, but there are multiple stenting techniques, and there is no consensus regarding which technique is preferred. The aim of this study was to compare an internal versus an external stenting technique on the incidence of UCs. Methods: This is a retrospective analysis of 419 deceased donor renal transplantations performed between January 2008 and December 2013. Until 2011, 183 patients received an external stent through the ureterovesical anastomosis placed by suprapubic bladder puncture (SP stent). From 2011, 236 recipients received an internal double-J (JJ) stent. Results: The rate of UC was 3.8% in JJ stents, compared to 9.3% in SP stents (p = 0.021). No difference in surgical ureter revision rate was observed between the groups (2.1 vs. 5.5%; p = 0.068). Urinary tract infection (UTI) rate and graft function were comparable between both groups. Conclusions: Internal JJ stenting significantly decreased the incidence of UC compared to an external SP stent. There was no difference in surgical ureter revision rate, UTI or graft function. Copyright © 2015 S. Karger AG, Basel.

Donor hemodynamics as a predictor of outcomes after kidney transplantation from donors after cardiac death.

Allen M.B., Billig E., Reese P.P., Shults J., Hasz R., West S., Abt P.L.

Embase

American Journal of Transplantation. 16 (1) (pp 181-193), 2016. Date of Publication: 01 Jan 2016.

[Article]

AN: 605992316

Donation after cardiac death is an important source of transplantable organs, but evidence suggests donor warm ischemia contributes to inferior outcomes. Attempts to predict recipient outcome using donor hemodynamic measurements have not yielded statistically significant results. We evaluated novel measures of donor hemodynamics as predictors of delayed graft function and graft failure in a cohort of 1050 kidneys from 566 donors. Hemodynamics were described using regression line slopes, areas under the curve, and time beyond thresholds for systolic blood pressure, oxygen saturation, and shock index (heart rate divided by systolic blood pressure). A logistic generalized estimation equation model showed that area under the curve for systolic blood pressure was predictive of delayed graft function (above median: odds ratio 1.42, 95% confidence interval [CI] 1.06-1.90). Multivariable Cox regression demonstrated that slope of oxygen saturation during the first 10 minutes after extubation was associated with graft failure (below median: hazard ratio 1.30, 95% CI 1.03-1.64), with 5-year graft survival of 70.0% (95%CI 64.5%-74.8%) for donors above the median versus 61.4% (95%CI 55.5%-66.7%) for those below the median. Among older donors, increased shock index slope was associated with increased hazard of graft failure. Validation of these findings is necessary to determine the utility of characterizing donor warm ischemia to predict recipient outcome. Using novel approaches to characterize donor hemodynamics in donation after cardiac death kidney transplantation, the authors show that data available at the time of organ procurement may predict delayed graft function and graft failure, particularly for recipients of kidneys from older donors. Copyright © 2015 The American Society of Transplantation and the American Society of Transplant Surgeons.

PMID


Status

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Institution
Feasibility and outcomes of laparoscopic sleeve gastrectomy after solid organ transplantation.

Embase
Surgery for Obesity and Related Diseases. 12 (1) (pp 75-83), 2016. Date of Publication: January 2016.
[Article]
AN: 604641918

Background: Obesity is common after solid organ transplantation and is associated with worse transplantation-related outcomes. Laparoscopic sleeve gastrectomy (LSG) may be the preferred bariatric operation in transplantation patients over other techniques, such as gastric bypass, given the concerns about medication absorption. However, little is known about LSG outcomes in posttransplantation patients. Objectives: We report the outcomes in 10 consecutive patients who underwent solid organ transplantation followed by LSG. Setting: An academic medical center. Methods: Primary outcomes studied were weight loss, perioperative complications, resolution or improvement of obesity-related co-morbidities, and markers of graft function following LSG. Results: The types of transplantation before LSG were as follows: liver = 5, kidney = 4, and heart
= 1. Mean body mass index (BMI) at LSG was 44.7 +/- 1.7 kg/m². All patients had hypertension, and 6 had type 2 diabetes. Perioperative complications occurred in 2 patients, and there were no deaths. Excess weight loss at 12 and 24 months after LSG was 45.7% and 42.5%, respectively. At 1 year after LSG, there was a significant reduction in the number of antihypertensive medications (2.4 to 1.5; P = .02). Three patients achieved complete remission of type 2 diabetes, and the other 3 significantly reduced their dosages of insulin. Graft function remained preserved in liver transplantation patients; left ventricular ejection fraction (LVEF) increased by 10% in the heart transplantation subject, and the estimated glomerular filtration rate (eGFR) increased significantly in kidney transplantation patients (53 +/- 3 to 82 +/- 3 mL/min; P = .03). Conclusions: We concluded that LSG, in selected patients with severe obesity after solid organ transplantation, results in significant weight loss, improvement or resolution of obesity-related conditions, and preservation or improvement of graft function. Larger studies are needed to determine tolerability standards. Copyright © 2016 American Society for Metabolic and Bariatric Surgery. All rights reserved.


Status EMBASE

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313.
Posttransplant Urinary Tract Infection Rates and Graft Outcome in Kidney Transplantation for End-Stage Renal Disease Due to Reflux Nephropathy Versus Chronic Glomerulonephritis.
Background The goal of this study was to evaluate posttransplant urinary tract infection (UTI) rates and graft outcome in kidney transplantation for end-stage renal disease (ESRD) due to vesicoureteral reflux (VUR)-related reflux nephropathy (RN) versus chronic glomerulonephritis (CGN).

Methods A total of 62 patients with ESRD who underwent kidney transplantation for VUR-related RN (VUR-RN group, n = 31; mean +/- standard deviation age, 34.1 +/- 6.0 years; 58.1% female) or CGN (CGN group, n = 31; mean age, 34.2 +/- 6.8 years; 71.0% male) at our unit between January 1996 and January 2011 were included in this retrospective study. Baseline recipient and donor characteristics, renal replacement therapy, posttransplant data on serum creatinine levels, graft outcome, and UTIs were recorded. Posttransplant UTIs and graft outcome were compared between the VUR-RN and CGN groups, as well as between patients with and without pretransplant nephrectomy in the VUR-RN group.

Results The frequency of overall (72 vs 18 of 90; P = .05) UTI episodes was significantly higher in the VUR-RN group than in the CGN group; Escherichia coli (64.2%) was the most common pathogen. The VUR-RN and CGN groups were similar in terms of 1-year (100.0% for each), 5-year (95.8% vs 96.8%), and 10-year (82.0% vs 96.8%) graft survival. VUR-RN patients with and without nephrectomy were similar in terms of 1-year (100.0% for each), 5-year (91.7% vs 85.7%), and 10-year (81.5% vs 85.7%) graft survival.

Conclusions Our findings indicate kidney transplantation is a safe and effective option in ESRD patients with RN secondary to VUR. It resulted in high 1-year, 5-year, and 10-year graft survival rates.
Background Reasons for declining kidney donors are older age, with or without, hypertension, kidney dysfunction, and diabetes. Implantation of both kidneys into a single recipient from such donors may improve their acceptability and outcome. Methods Patients who underwent dual kidney transplantation (DKT) between June 2010 and May 2014 were identified from a prospectively maintained database. Single kidney transplantations (SKT) with matching donor criteria were also identified. Donors considered for DKT were the following: DBDs >70 years of age with diabetes and/or hypertension; DCDs >65 years of age with diabetes and/or hypertension; and DCDs >70 years of age. Results Over a 4-year period, 34 patients underwent adult DKT, and 51, with matching donor criteria, underwent SKT. The median estimated glomerular filtration rate (eGFR) at 12 and 36 months of DKT was 49 (range, 5-79) and 42 (range, 15-85) mL/min compared with SKT of 35 (range, 10-65) and 32 (range, 6-65), respectively. The 1-year graft survival for DKT and SKT was 88% and 96% (P = .52), and patient survival was 94% and 98%, respectively (P = .12). Median hospital stay, intensive care unit admission, and wound complications were more frequent in the DKT group. Conclusions Graft function following DKT is significantly better compared with matched criteria SKT; graft and patient survival are similar. There is an increased rate of complications following DKT, with longer hospital stay and ICU admission.

PMID
Renal transplantation in adults.
Nieto T., Inston N., Cockwell P.


[Article]
AN: 613492725
PMID

Status
EMBASE
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Towards a standardized informed consent procedure for live donor nephrectomy: What do surgeons tell their donors?.
Kortram K., Ijzermans J.N.M., Dor F.J.M.F.
Embase
[Article]
AN: 611066527

Introduction Living kidney donors comprise a unique group of "patients", undergoing an operation for the benefit of others. The informed consent process is therefore valued differently. Although this is a team effort, the surgeon is responsible for performing the donor nephrectomy, and often the one held accountable, should adverse events occur. Although there is some consensus on how the informed consent procedure should be arranged, practices vary. The aim of this study was to evaluate the surgical informed consent procedure for live donor nephrectomy, with special regards to disclosure of complications. Methods A web-based survey was sent to all kidney transplant surgeons (n = 50) in eight transplant centers with questions regarding the local procedure and disclosure of specific details. Results Response rate was 98% (n = 49), of which 32 (65%) were involved in living donor education; overall, transplant- (50%), vascular- (31%), and abdominal surgeons (13%), and urologists (6%) performed donor nephrectomies in the eight centers. Informed consent procedures varied, ranging from assumed to signed consent. Bleeding was the only complication every surgeon mentioned. Risk of death was always mentioned by 16 surgeons (50%), sometimes by 13 (41%), three surgeons (9%) never disclosed this disastrous complication. Reported mortality rates ranged from 0.003% to 0.1%. Mentioning frequencies for all other complications varied. Conclusion Important complications are not always disclosed during the surgical informed consent process for live donor nephrectomy. Informed consent procedures vary. To optimally prepare living kidney donors for the procedure, a standardized informed consent procedure for live donor nephrectomy is highly recommended. Copyright © 2016 IJS Publishing Group Ltd
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EMBASE
Institution

Wang J., Yu W., Gao M., Gu C., Yu Y.

This meta-analysis investigated the effects of preoperative prophylactic intraaortic balloon pump placement on postoperative renal function and short-term death of high-risk patients undergoing coronary artery bypass grafting. We found that preoperative prophylactic intraaortic balloon pump support reduced the incidence of coronary artery bypass grafting-associated acute kidney injury and short-term death and dramatically decreased the incidence of postoperative renal replacement therapy by 82% compared with high-risk patients without the procedure. This is the first meta-analysis to demonstrate significant beneficial effects of preoperative prophylactic intraaortic balloon pump on renal function in high-risk patients undergoing coronary artery bypass grafting.

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Risk of cerebral infarction in Japanese hemodialysis patients: Miyazaki Dialysis Cohort Study (MID study).

Toida T., Sato Y., Nakagawa H., Komatsu H., Uezono S., Yamada K., Ishihara T., Hisanaga S., Kitamura K., Fujimoto S.

Embase

[Article]
AN: 611348906

Background/Aims: Predictors including the preventive effects of antiplatelet and anticoagulant drugs on cerebral infarction (CI) events have not yet been clarified in dialysis patients. The aim of the present study was to examine the risk of CI and preventive effects of these drugs in Japanese hemodialysis patients. Methods: Patients receiving maintenance hemodialysis (n=1,551, median age (interquartile range), 69.0 (59.0-78.0) years; 41.5% female) were enrolled in the Miyazaki Dialysis Cohort Study and prospectively followed-up for 3 years. Kaplan-Meier and Cox's regression analyses were used to clarify the risk of CI. Results: Eighty-four patients developed CI at an incidence of 21.5/1000 patients per year. The presence of a previous history of CI, atrial fibrillation (AF), and diabetes mellitus in addition to age were also identified as predictive factors for new CI, whereas no relationship was observed between antiplatelet and/or anticoagulant usage and CI. Furthermore, no significant difference was noted in the frequency of CI events between patients with AF who received warfarin and those who did not. Conclusions: The incidence of CI was higher in dialysis patients with a previous history of CI and AF; however, the
Renal involvement in primary antiphospholipid syndrome.
Marcantoni C., Emmanuele C., Scolari F.

Antiphospholipid syndrome is an autoimmune disorder characterized by recurrent venous or arterial thrombosis and/or pregnancy-related problems associated with persistently elevated
levels of antiphospholipid antibodies. The kidney is a major target organ in both primary and secondary antiphospholipid syndrome. This review describes several aspects of the renal involvement in the primary form of the syndrome, in particular the histological pattern of the so-called antiphospholipid syndrome nephropathy (APSN). APSN is a vascular nephropathy characterized by small vessel vaso-occlusive lesions associated with fibrous intimal hyperplasia of interlobular arteries, recanalizing thrombi in arteries and arterioles, and focal atrophy, a constellation of morphological lesions suggestive of primary antiphospholipid syndrome.

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320.
Proceedings of the 10th East-West Immunogenetics Conference.
Anonymous
Embase
[Conference Review]
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The proceedings contain 75 papers. The topics discussed include: pharmacogenetics in immunosuppressive management (transplantation and rheumatoid arthritis); pharmacogenetic testing for statin-induced myopathy: method implementation and risk variant distribution in a Czech population; characterisation of CYP2C19 gene variants by mass array and point-of-care techniques and its application for pharmacogenetics of antithrombotic therapy; impact of the NKG2D genetic variants on clinical response to anti-TNF therapy; antigen match, ischemia and death and transplant immunogenicity; role of BAFF cytokine in kidney transplant rejection; outcomes of basiliximab and thymoglobulin induction an recipients under 50 years old after heart transplantation; impact of HLA allele polymorphisms in liver transplantation; solid phase assay anti-HLA antibodies and their impact on pediatric kidney graft function in one-year perspective; tissue typing center Zagreb - view from outside and inside eurotransplant; analysis of the IL-17 receptors genetic variants in relation to polymorphisms and expression of the IL-17A and IL-17F encoding genes patients awaiting kidney transplantation; occurrence of autoantibodies in highly immunized potential kidney recipients; and analysis of anti-HLA Class II antibodies in patients classified to kidney transplant including the antibodies against DP and DQ antigens.

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321.
Ear length and kidney function decline after kidney donation.
Katavetin P., Watanatorn S., Townamchai N., Avihingsanon Y., Praditpornsilpa K.
Embase
Nephrology. 21 (11) (pp 975-978), 2016. Date of Publication: 01 Nov 2016.
[Article]
AN: 612654593
The preservation of kidney function after kidney donation depends on the kidney reserve - the potential of the remaining kidney to boost their function after loss of the other kidney. In
Traditional Chinese Medicine, size and shape of the external ears are examined to evaluate the person's kidney health. We hypothesized that ear size might be a practical yet overlooked marker of kidney reserve. Fifty kidney transplantation donors were participated in this study. The length and width of both ears of all participants were measured during one of the post-donation visits. Pre-donation serum creatinine and post-donation serum creatinine as well as other relevant parameters (age, sex, weight, height, etc.) of the participants were extracted from medical records. The estimated GFR was calculated from serum creatinine, age and sex using the CKD-EPI equation. Ear length negatively associated with %GFR decline after kidney donation. For every 1 cm increase in ear length, it was associated with 5.7% less GFR decline after kidney donation (95% Confidence Interval 0.2 to 11.3, P = 0.04). Ear width, as well as age, sex, body weight, height, body mass index, and pre-donation eGFR did not significantly associate with the GFR decline. Our findings support the notion of Traditional Chinese Medicine that ear morphology may be associated with kidney health and suggest that ear length might be a useful predictor of kidney function decline after kidney donation. Copyright © 2016 Asian Pacific Society of Nephrology

PMID

Status
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Background Renal transplantation is the treatment of choice of end-stage renal failure. However, vascular surgical complications can compromise the functional prognosis of the transplant or even be life threatening in the short term. Since few data are available in the literature, the objective of this study was to evaluate the vascular surgical complications of renal transplantation. Methods In a retrospective and monocentric study, the records of all the patients receiving a kidney transplant between January 2008 and December 2014 were reviewed. The demographic data and the follow-up of the patients who presented a vascular surgical complication in relation to their transplant were collected. Minor, intermediate, or major vascular complications were defined according to the need for monitoring, reoperation, or the risk of transplant loss or a life-threatening situation. Predictive factors of vascular complications were also looked for. Results Mean age was 50.9 +/- 15.0 years, and 312 kidney transplants were carried out (205 men). Fifty vascular surgical complications (16.0%) were found. Among them, 23 vascular complications (7.4%) were major, including 6 (1.9%) which required transplantectomy, after 4 arterial thromboses (1.3%), 1 early venous thrombosis (0.3%), and 1 injury of the inferior vena cava (0.3%). Twelve complications (3.8%) were minor. Surgical revision was necessary in 76% of the vascular complications (n = 38). The average follow-up of the transplanted population was 37.4 +/- 24.0 month, 268 kidney transplants (85.8%) were functional and 21 patients (6.7%) returned to dialysis. Surgical complications were more frequent when the recipient had hypertension (P = 0.02, OR = 2.5; 95% CI [1.1-6.1]), in case of right kidney transplant (P = 0.0004, OR = 3.1; 95% CI [1.6-5.8]) and when the kidney hilum consisted of at least arteries (P = 0.02, OR = 10.0; 95% CI [1.3-34]). Male gender (P = 0.03, OR = 0.5; 95% CI [0.3-0.9]) as well as the choice of the common iliac arterial (P = 0.001, OR = 0.4; 95% IC [0.2-0.7]) and venous (P = 0.002, OR = 0.3; 95% IC [0.2-0.8]) axes to carry out the vascular anastomoses appeared as protective factors. Conclusions The vascular surgical complications of kidney transplantation, especially thromboses, can be serious and lead to transplant loss. The expertise of vascular surgeons finds its place here and makes it possible to maintain low rates of vascular complications and loss of transplants.

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Institution
A single center's approach to discriminating donor versus host origin of renal neoplasia in the allograft kidney.

Robin A.J., Cohen E.P., Chongkairatanakul T., Saad E., Mackinnon A.C.

Embase

Annals of Diagnostic Pathology. 23 (pp 32-34), 2016. Date of Publication: 01 Aug 2016.

[Article]

AN: 610788223

Renal cell carcinoma (RCC) in the allograft of kidney transplant recipient (KTR) patients is rare and may represent a de novo process arising from the transplanted organ or metastasis from a clinically undetectable host primary. Determination of host versus donor origin is important for staging and management. We report our experience utilizing Penta-C (PC) and Penta-D (PD) short-tandem repeat (STR) microsatellite analysis to discriminate between host and donor origin of RCC identified in renal allografts. We identified 5 KTR patients with RCC in the allograft kidney. The PC and PD microsatellite analysis was applied to tumor, host, and donor formalin-fixed, paraffin-embedded tissue sections and/or fresh blood leukocytes to identify the origin of the neoplastic cells. The PC and PD microsatellite alleles were robustly amplified in all samples. Each case showed one or more informative alleles indicating that the neoplastic cells originate from donor tissue. Allele frequency data indicate that by using both PC and PD markers, we will
be able to discriminate between host and donor cell of origin in over 99% of cases. The PC and PD microsatellite analysis is a convenient, robust, and efficient strategy to determine donor versus host origin or RCC in transplant kidney specimens. Copyright © 2016 Elsevier Inc. All rights reserved.

PMID

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2016

324.
AN: 607368830

Background As compared with traditional laparoscopy, robotic-assisted surgery provides better EndoWrist instruments and three-dimensional visualization of the operative field. Studies published so far indicate that living donor nephrectomy using the robot-assisted technique is safe, feasible, and provides remarkable advantages for the patients. Methods From 5 papers reporting detailed descriptions of surgical technique for robotic assisted nephrectomy (RAN) in living donor kidney transplantation, we have gathered information about the surgical techniques as well as about patients' intra- and postoperative outcome. Data from these articles were analyzed together
with the data from our own experience (33 cases) so that the total number of analyzed cases was 292. Results In the analyzed populations, no case of donor death occurred, and no case developed complication above grade 2 of Clavien score. Perioperative complications occurred in 37 of the 292 patients (12.6%). Accidental acute hemorrhage occurred in 5 of the 292 cases (1.7%). The average overall intraoperative blood loss was 67.8 mL (range 10 to 1,500). The average warm ischemia time was 3.5 minutes (range 0.58 to 7.6). Conversion to the open technique occurred in only 4 cases (1.3%). The average overall operative time was 192 minutes (range 60 to 400). The average length of the hospital stay was 2.7 days (range 1 to 10).

Conclusions Safety and feasibility of RAN are pointed out in all the reviewed article, both as hand-assisted and as totally robotic technique. RAN appears to be significantly easier for the surgeons and the results are comparable with the ones obtained with the pure laparoscopic technique. Copyright © 2015 Elsevier Inc.


Status EMBASE

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325.

Epidemiology of surgical site infection in a community hospital network.

Embase
Infection Control and Hospital Epidemiology. 37 (5) (pp 519-526), 2016. Date of Publication: 01 May 2016.
[Article]
AN: 610083427

Objective. To describe the epidemiology of complex surgical site infection (SSI) following commonly performed surgical procedures in community hospitals and to characterize trends of SSI prevalence rates over time for MRSA and other common pathogens methods. We prospectively collected SSI data at 29 community hospitals in the southeastern United States from 2008 through 2012. We determined the overall prevalence rates of SSI for commonly performed procedures during this 5-year study period. For each year of the study, we then calculated prevalence rates of SSI stratified by causative organism. We created log-binomial regression models to analyze trends of SSI prevalence over time for all pathogens combined and specifically for MRSA. Results. A total of 3,988 complex SSIs occurred following 532,694 procedures (prevalence rate, 0.7 infections per 100 procedures). SSIs occurred most frequently after small bowel surgery, peripheral vascular bypass surgery, and colon surgery. Staphylococcus aureus was the most common pathogen. The prevalence rate of SSI decreased from 0.76 infections per 100 procedures in 2008 to 0.69 infections per 100 procedures in 2012 (prevalence rate ratio [PRR], 0.90; 95% confidence interval [CI], 0.82’1.00). A more substantial decrease in MRSA SSI (PRR, 0.69; 95% CI, 0.54’0.89) was largely responsible for this overall trend. Conclusions. The prevalence of MRSA SSI decreased from 2008 to 2012 in our network of community hospitals. This decrease in MRSA SSI prevalence led to an overall decrease in SSI prevalence over the study period. Copyright © 2016 by The Society for Healthcare Epidemiology of America.

326.
Expanding living kidney donor criteria with ex-vivo surgery for renal anomalies.
Mcgregor T.B., Rampersad C., Patel P.
Embase
Canadian Urological Association Journal. 10 (9-10) (pp 301-305), 2016. Date of Publication: September-October 2016.
[Article]
AN: 614216277
Introduction: Renal transplantation remains the gold standard treatment for end-stage renal disease, with living donor kidneys providing the best outcomes in terms of allograft survival. As the number of patients on the waitlist continues to grow, solutions to expand the donor pool are ongoing. A paradigm shift in the eligibility of donors with renal anomalies has been looked at as a potential source to expand the living donor pool. We sought to determine how many patients presented with anatomic renal anomalies at our transplant centre and describe the ex-vivo surgical techniques used to render these kidneys suitable for transplantation. Methods: A retrospective review was performed of all patients referred for surgical suitability to undergo laparoscopic donor nephrectomy between January 2011 and January 2015. Patient charts were analyzed for demographic information, perioperative variables, urological histories, and postoperative outcomes. Results: 96 referrals were identified, of which 81 patients underwent laparoscopic donor nephrectomy. Of these patients, 11 (13.6%) were identified as having a renal anomaly that could potentially exclude them from the donation process. These anomalies included five patients with unilateral nephrolithiasis, four patients with large renal cysts (>4 cm diameter), one patient with an angiomyolipoma (AML) and one patient with a calyceal diverticulum filled with stones. A description of the ex-vivo surgical techniques used to correct
327.
From donation to everyday life: Living kidney donors’ experiences three months after donation.
Agerskov H., Ludvigsen M.S., Bistrup C., Pedersen B.D.
Embase
[Article]
AN: 614482336
BACKGROUND: As the number of patients with end stage kidney disease continues to rise internationally, living kidney donation remains a favourable treatment option. Long waiting times on dialysis can be avoided and short and long-term outcomes are better, when compared with deceased donor transplantation. Living kidney donation is a safe procedure for healthy individuals who have completed a rigorous screening programme. Significant experiences can occur during the recovery period. OBJECTIVE: To investigate donors’ experiences of donation and their recovery period, in the first three months after donation.
MATERIALS AND METHODS: The study took a phenomenological-hermeneutic approach. Open interviews were conducted three months after donation. Data were interpreted and discussed in
accordance with Ricoeur's text interpretation theory on three levels: naive reading, structural analysis and critical interpretation and discussion.

FINDINGS: The donation process was experienced as an 'expedition', including preparations, the operation, recovery and everyday life. Positive feelings were challenging to describe; however health troubles and vulnerability were evident. A closer relationship and a need to follow the recipient's progress implied that patient and donor felt they were a part of each other. Support from relatives was important but could also be a burden.

CONCLUSION: The kidney donation process is experienced as being like on an expedition, involving positive feelings, vulnerability, a closer patient-donor relationship and challenges around family relationships. It is essential that nurses are aware of the complexity of the situation and focus on the impact of the process, to support and facilitate donors' needs.

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20170222

Year of Publication
2016


Johnson A.P., Price T.P., Lieby B., Doria C.

Embase

[Article]
Background: Dual kidney transplantation (DKT) of expanded-criteria donors is a cost-intensive procedure that aims to increase the pool of available deceased organ donors and has demonstrated equivalent outcomes to expanded-criteria single kidney transplantation (eSKT). The objective of this study was to develop an allocation score based on predicted graft survival from historical dual and single kidney donors. Material/Methods: We analyzed United Network for Organ Sharing (UNOS) data for 1547 DKT and 26,381 eSKT performed between January 1994 and September 2013. We utilized multivariable Cox regression to identify variables independently associated with graft survival in dual and single kidney transplantations. We then derived a weighted multivariable product score from calculated hazard ratios to model the benefit of transplantation as dual kidneys. Results: Of 36 donor variables known at the time of listing, 13 were significantly associated with graft survival. The derived dual allocation score demonstrated good internal validity with strong correlation to improved survival in dual kidney transplants. Donors with scores less than 2.1 transplanted as dual kidneys had a worsened median survival of 594 days (24%, p-value 0.031) and donors with scores greater than 3.9 had improved median survival of 1107 days (71%, p-value 0.002). There were 17,733 eSKT (67%) and 1051 DKT (67%) with scores in between these values and no differences in survival (p-values 0.676 and 0.185). Conclusions: We have derived a dual kidney allocation score (DKAS) with good internal validity. Future prospective studies will be required to demonstrate external validity, but this score may help to standardize organ allocation for dual kidney transplantation. Copyright © Ann Transplant.
Mesenchymal stem cells induced in vitro generated regulatory-T cells: Potential soldiers of transplantation biology.

Dave S.D., Vanikar A.V., Trivedi H.L.

Embase

Current Biotechnology. 5 (2) (no pagination), 2016. Date of Publication: 01 May 2016.

[Article]

AN: 614145981

Introduction: CD4+ regulatory T-cells that constitutively express CD25 have a potent mechanism of action of immunomodulation and hence hold a great therapeutic potential for the treatment of autoimmune diseases and tolerance induction in the context of solid organ transplantation.

Methods: For in vitro generation of Tregs volunteer donor's adipose tissue was resected and mesenchymal stem cells (MSC) were generated. MSC were co-cultured with post-renal transplantation recipient's peripheral blood derived peripheral blood mononuclear cells (PBMC) and with irradiated PBMC from same recipient with the addition of exogenous IL-2. Controls were carried out without use of MSC. In vitro generated Tregs were subjected for quantitative and qualitative analysis of Tregs specific markers. Results: Quantitative analysis revealed increased cell counts of Tregs in comparison to PBMC. Tregs specific markers evaluation using flocytometer showed rise in all Treg specific cell population: CD4+25+127Neg with mean 7.6 +/- 6.1%, CD4+FoxP3+ mean of 21.7 +/- 15.3% and CD4+CTLA-4+ mean of 16.9 +/- 13.7%.

Conclusion: We conclude that MSC induce in vitro generation of Tregs. In vitro generated Tregs hold a great promise as "magic bullet" for various disease prevention and/or treatment.

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330.
Multiple Renal Arteries in Kidney Transplantation: A Systematic Review and Meta-Analysis.
Zorgdrager M., Krikke C., Hofker S.H., Leuvenink H.G., Pol R.A.
Embase
[Article]
AN: 614452762
BACKGROUND: The use of grafts with multiple renal arteries (MRA) in renal transplantation has not been clearly established. MATERIAL/METHODS: A systematic literature review used predefined terms to search PubMed, EMBASE, and the Cochrane Library for all studies since 1985 that included more than 50 MRA grafts. A total of 23 studies, comprising a total of 18,289 patients, were eligible to be included in the meta-analysis.
RESULTS: Patients who received an MRA graft compared to single renal artery (SRA) grafts showed significantly higher complication rates (13.8% vs. 11.0%, OR 1.393, p<0.0001), more delayed graft function (10.3% vs. 8.2%, OR 1.333, p=0.022), and had an associated significantly lower 1-year graft survival (93.2% vs. 94.5%, OR 0.819, p=0.034). Both the creatinine level and the warm ischemia time (WIT) were significantly higher in patients with MRA grafts but showed high heterogeneity (I2 98% for WIT and I2 70% for creatinine level). Although MRA grafts were associated with more complications compared to SRA grafts, long-term outcomes were similar for 5-year graft survival (81.4% vs. 81.6%) and 1- and 5-year patient survival (95.4% and 89.6% in MRA group vs. 95.4% and 87.0% in SRA group, respectively).
CONCLUSIONS: MRA grafts were associated with a higher risk of complication and delayed graft function but had comparable long-term outcomes for graft and patient survival.
PMID
Patient stratification and therapy in atypical haemolytic uraemic syndrome (aHUS).
Wong E., Challis R., Sheerin N., Johnson S., Kavanagh D., Goodship T.H.J.

Immunobiology. 221 (6) (pp 715-718), 2016. Date of Publication: 01 Jun 2016.

Approximately 50% of aHUS patients have an underlying inherited and/or acquired abnormality of complement which predisposes to excessive activation of the alternative pathway. Use of complement inhibitors such as eculizumab to treat aHUS is therefore logical. Anecdotal reports and subsequent open-label trials demonstrated the efficacy of eculizumab in aHUS leading to approval by both the FDA and EMA. NHS England established in 2013 an interim national service for aHUS including funding for eculizumab for both new patients and those undergoing transplantation. NICE guidance now also recommends eculizumab for funding within the NHS in England under the coordination of an expert centre. The investigation and response to treatment
332.
A national study of kidney graft tumor treatments: Toward ablative therapy.
Guleryuz K., Doerfler A., Codas R., Coffin G., Hubert J., Lechevalier E., Tillou X., Badet L.,
Barrou B., Bessede T., Blanchet P., Boutin J.M., Branchereau J., Culty T., Delaporte V., Gaudez
F., Gigante M., Karam G., Kleinclauss F., Neuzillet Y., Sallusto F., Salomon L., Terrier N., Thuret
R., Timsit M.O., Verhoest G.
Embase
Surgery (United States). 160 (1) (pp 237-244), 2016. Date of Publication: 01 Jul 2016.
[Article]
AN: 609365035
Background Results of the conservative treatment of renal cell carcinomas arising in functional
renal transplants are unknown compared to transplant nephrectomy. Only small series or case
reports have been reported. Methods Data were collected from 32 transplantation centers
nationwide on cases of de novo tumors in functional renal transplants presumed to be malignant
between January 1988 and December 2013. Results Among 116 de novo transplant tumors, 62
were treated conservatively including: 48 by partial nephrectomy (PN) and 14 by thermal ablation
(TA). These patients were compared to 30 other patients who were treated by transplant
nephrectomy. The median age of the transplanted kidneys at the time of diagnosis was 43.5
years old as calculated from the donor's age. Tumors treated by transplant nephrectomy presented more often with symptoms (pain, fever, impaired condition, hematuria) than tumors treated conservatively (P = .019). After PN, final histology showed 27 (47.5%) papillary carcinomas, 19 (32.2%) clear cell carcinomas, 1 mixed carcinoma, and 2 oncocytoplasms. The median tumor size treated by PN was 24 mm with no difference in comparison to the TA group. Nine patients treated by PN had postoperative complications (21%), including 4 requiring operative intervention (Clavien IIIb). None of the patients treated by TA had complications. Specific survival was 100% at the time of last follow-up (median time after treatment 37 months) for patients treated by PN or TA. Conclusion PN proved to be efficient in the treatment of small tumors of transplanted kidneys with good long-term functional and oncologic outcomes, including avoiding return to dialysis. TA seems to be an alternative therapy with good results in selected patients. Copyright © 2016 Elsevier Inc.

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(Guleryuz, Tillou) Normandie University, Normandie, France
(Guleryuz, Tillou) UNICAEN, Caen, France

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333.
Reduction of cold ischemia time and anastomosis time correlates with lower delayed graft function rates following transplantation of marginal kidneys.
Background: In kidney transplantation, the association of cold ischemia time (CIT), anastomosis time (AT), and delayed graft function (DGF) is particularly detrimental in grafts from marginal donors; however, actual cut-off criteria are still debated. Material/Methods: Data from patients >65 years (n=193) and patients <65 years (n=1054) transplanted between 2000 and 2010 were retrospectively analyzed regarding the age-dependent impact of ischemia times and DGF. Results: Overall death censored graft survival was inferior for ECD/DCD organs. Graft survival was significantly impaired by DGF in younger and older recipients. The multivariate analysis revealed an age-dependent profile of risk factors for DGF. In younger patients, multiple risk factors were identified while in patients >65 years, only CIT and AT were correlated with DGF. Marginal grafts with a CIT<769 min had a comparable outcome to any SCD organ; extended CIT >770 min worsened ECD/DCD survival significantly. Similarly, AT longer than 26 min was associated with a significantly impaired survival of ECD/DCD grafts. In a Cox regression analysis with penalized splines, this increased risk of graft loss was not linear: CIT beyond 800 min and AT beyond 20 min were cutoff values associated with worse outcomes in marginal organs. Conclusions: Thus, risk factors for DGF are age-dependent; keeping ischemia times below these thresholds offers outcome of ECD/DCD organs comparable to SCD organs. Copyright © Ann Transplant, 2016.

Impact of grafting using thin upper pole artery ligation on living-donor adult kidney transplantation: The STROBE study.

Hiramitsu T., Okada M., Futamura K., Yamamoto T., Tsujita M., Goto N., Narumi S., Watarai Y.


[Article]
AN: 613278279

This study aimed to investigate the impact of grafting using thin upper pole artery ligation for living-donor adult kidney transplantation. Few reports have examined the safety of thin upper pole artery ligation. Between January 2008 and May 2015, 613 consecutive living-donor adult kidney transplantations were performed. We excluded 21 recipients who experienced graft loss due to factors that were unrelated to surgical complications and 3 recipients with grafts treated with arterial reconstruction and thin upper pole artery ligation for 3 arteries. We included 439 kidney grafts with single arteries (Single Artery Group), 123 with reconstructed arteries (Arterial Reconstruction Group) and 27 with ligated thin upper pole arteries (Arterial Ligation Group) in this retrospective cohort study. To evaluate the safety of thin upper pole artery ligation, we compared the Arterial Ligation Group with the Single Artery and Arterial Reconstruction groups. We evaluated the characteristics of the enrolled donors, recipients, and their grafts. Thereafter, we investigated recipients' perioperative and postoperative estimated glomerular filtration rate (eGFR) and complication rates. Significant differences among the 3 groups were identified for donor sex and endoscopic nephrectomy rates. Recipient eGFR and the complication rates were adjusted according to these factors. The perioperative and postoperative eGFR of recipients did not differ significantly in the Arterial Reconstruction and Single Artery groups with low complication rates. Thin upper pole artery ligation is a safe procedure for living-donor adult kidney transplantation and may prevent unnecessary arterial reconstruction and associated
A meta-analysis of renal outcomes in living kidney donors.
Embase
[Review]
AN: 611009506
Given the increased burden of end-stage renal disease (ESRD), renal outcomes of kidney donation by living donors are of particular interest. PubMed, ProQuest, MEDLINE, EMBASE, Chinese national knowledge infrastructure, and Wanfang databases were searched for clinical outcomes of living kidney donors (LKD) including renal death, ESRD, proteinuria/albuminuria, and renal function after donation. We included 62 studies from 19 countries involving 114,783 kidney donors and nondonors to evaluate the renal consequences less than 6 months, 6 months to 5 years, 5 to 10 years, and 10 years onward after donation. The pooled data showed that uninephrectomy significantly decreased glomerular filtration rate and creatinine clearance rate in
parallel with increased serum creatinine concentration (all P<0.05). The drastic changes in renal function occurred within 6 months rather than 5 to 10 years after donation. Ten years and onward, rate of proteinuria/albuninuria increased gradually: microalbuminuria from 5.3% to 20.9%, proteinuria from 4.7% to 18.9%, and overt proteinuria from 2.4% to 5.7% (all P<0.05). Prevalence of ESRD was 1.1%. All-cause mortality was 3.8% and all the renal deaths on average occurred 10 years postnephrectomy. LKD might have aggravated glomerular filtration and creatinine clearance within 6 months after donation. Five years and onward, albuminuria, proteinuria, ESRD, and death might be the major concerns of LKD. Long-term studies may clarify the survival time after donation. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.
AN: 614219127

The analysis of anti-HLA sensitization at the time of and following allograft nephrectomy may help clinicians to define better both the indications for nephrectomy and preventive therapeutic strategies. We carried out a retrospective analysis of anti-HLA antibodies in 63 clinically indicated nephrectomies (baseline and three and 12 months after) according to the time elapsed since transplantation (six months) and clinical background. An intervention study included 10 patients without donor-specific antibodies (DSA) at the time of nephrectomy treated with high-dose intravenous immunoglobulin (IVIG) (1.5 g/kg). Early nephrectomies were performed in 15 patients (24%). Among the late nephrectomies, 14 patients (22%) were asymptomatic and 34 (54%) had graft intolerance syndrome (GIS). At baseline, anti-HLA sensitization was significantly lower in the early and late asymptomatic groups than in the GIS group, but increased considerably within the three months following surgery. In the group of 10 patients treated with IVIG, only the number of class I non-DSA increased in the three months after surgery, whereas in the control group (N = 13), all anti-HLA variables increased significantly. All patients undergoing a clinically indicated allograft nephrectomy become highly sensitized within the 12 months after surgery. In patients without DSA before nephrectomy, high doses of IVIG may prevent anti-HLA sensitization.

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2016
Suggestions on how to make suboptimal kidney transplantation an ethically viable option.

Graziano V., Buccelli C., Capasso E., De Micco F., Casella C., Di Lorenzo P., Paternoster M.

Embase
Open Medicine (Poland). 11 (1) (pp 523-529), 2016. Date of Publication: 01 Jan 2016.

[Conference Paper]

AN: 614082659

To overcome kidney donation, the pool of potentially eligible donors has been widened by using suboptimal organs harvested from living donors or cadavers. These organs may engender health complications as age, risk factors, and pathologies of donors fail to meet the standard donor criteria. After examining a wide array of literature on suboptimal kidney transplants, we evidenced two major issues: The lack of standardized terminology and the lack of longterm data on the health outcomes of both suboptimal living donors and recipients. Consequently, surgeons are still unable to provide patients with thorough information to obtain a well-informed consent.

Suboptimal kidney transplantation still remains in its experimental stage, thereby raising many ethical and medico-legal concerns. We suggest that one possible solution to overcome some of the ethical shortcomings of suboptimal kidney donations is to provide living donors and recipients honest, accurate, and thorough information about its health risks. To this aim, we advocate adopting a widely standardized terminology that would embrace the whole concept of suboptimal kidney transplantation, increasing the number of future publications on the health outcomes of living donors and recipients, spurring ethical reflection to improve the experience of suboptimal kidney transplantation and reduce the waiting-list for kidney transplantation. Copyright © 2016 Vincenzo Graziano et al. published by De Gruyter Open.

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20170202

Year of Publication
Neutrophil Gelatinase-Associated Lipocalin, Fibroblast Growth Factor 23, and Soluble Klotho in Long-Term Kidney Donors.
Thorsen I.S., Bleskestad I.H., Jonsson G., Skadberg O., Goransson L.G.
Embase
Nephron Extra. 6 (3) (pp 31-39), 2016. Date of Publication: 12 Jan 2016.
[Article]
AN: 614126520

Background: The best treatment for end-stage renal disease (ESRD) is kidney transplantation. Twenty-seven percent of transplantations in Norway are from living donors. Recent studies have shown an increased risk of ESRD and increased mortality in donors. The aim of this study was to determine if the levels of the new biomarkers neutrophil gelatinase-associated lipocalin (NGAL), soluble Klotho (sKlotho), and fibroblast growth factor 23 (FGF23) are changed in kidney donors with normal kidney function defined as an estimated glomerular filtration rate (eGFR) >60 ml/min/1.73 m2 compared to patients with chronic kidney disease (CKD) stages 3-5 and healthy controls. Methods: This is a cross-sectional, observational, single-center study including 35 kidney donors with an eGFR >=60 ml/min/1.73 m2 5 years after donation, 22 patients with CKD stage 3 (eGFR 30-59 ml/min/1.73 m2), 18 patients with CKD stage 4 (eGFR 15-29 ml/min/1.73 m2), 20 patients with CKD stage 5 (eGFR <15 ml/min/1.73 m2), and 35 controls comparing levels of biomarkers in long-term kidney donors with those in CKD patients and healthy controls.

Results: The level of log NGAL was significantly higher in donors than in healthy controls (2.02 +/- 0.10 vs. 1.89 +/- 0.10 ng/ml; p < 0.001), and the level increased with declining kidney function. The log FGF23 level was nonsignificantly higher in donors than in controls, but it significantly increased with declining kidney function. The log sKlotho levels were significantly lower in patients with CKD stages 4 and 5 than in controls, but no difference was revealed between controls and donors. Conclusion: Kidney donors have significantly higher levels of NGAL than healthy controls after a median of 15 years (range 5-38). NGAL could be a valuable diagnostic marker in the future. FGF23 and sKlotho were not significantly different between donors and controls. Copyright © 2016 The Author(s).
Outcomes of kidney transplantation from circulatory death donors with increased terminal creatinine levels in serum.
Tomita Y., Tojimbara T., Iwadoh K., Nakajima I., Fuchinoue S.

Embase
Transplantation. 100 (7) (pp 1532-1540), 2016. Date of Publication: 21 Jun 2016.
[Article]
AN: 606518374

Background. To alleviate chronic renal graft shortages in Japan, donation after circulatory death (DCD) is an increasingly used organ resource. Organs from DCD donors with progressively increased terminal creatinine (t-Cr) levels are frequently used, but the effects of this condition on kidney transplantation (KTx) remain unclear. Methods. Between 1996 and 2013, 99 KTx from DCD donors were conducted in our department. Recipients were grouped according to the t-Cr (in mg/dL) of donors: group 1, t-Cr less than < 1.5; group 2, 1.5 <= t-Cr < 3.0; and group 3, t-Cr >= 3.0. We analyzed the long-term outcomes of KTx from DCD donors retrospectively in terms of donors' terminal renal function. Results. The respective mean donor t-Cr in groups 1, 2, and 3 were 0.73 +/- 0.28, 2.02 +/- 0.40, and 6.69 +/- 3.68. The respective death-censored graft survival rates (%) in groups 1, 2, and 3 were 90.2, 96.2, and 86.7 at 1 year and 70.3, 86.2, and 73.4 at 10 years after transplantation. Group 1 exhibited lower incidence of delayed graft function than either group 2 or group 3 (80.5% vs 100% and 93.3%). Nevertheless, no significant difference was found between groups for several measures: Cr levels 1 month after KTx and lowest Cr levels
throughout the observation period, prevalence of biopsy-proven acute rejection, and graft survival. Cox proportional hazard regression showed that donor age, cerebrovascular event, terminal urine output, and history of hypertension were significantly associated with graft survival. Conclusions. Results suggest that, under certain conditions, kidneys from DCD donors with progressively increased t-Cr can be used safely with promising long-term outcomes. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.

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20170116
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2016
recipients manifest features of a chronic prothrombotic state. Identification of hereditary thrombotic risk factors before transplantation may be a useful tool for selecting appropriate candidates for thrombosis prophylaxis immediately after transplantation. Short-term anticoagulation may be appropriate for all patients after kidney transplantation. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.

PMID

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Lippincott Williams and Wilkins (E-mail: kathiest.clai@apta.org)

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2016

341.
Salvage of a live-related transplant kidney using an interposition polytetrafluoroethylene vascular graft: A unique case.
Kandilis A., Di Cocco P., Rajagopa P., Hakim N.S.

Embase
[Article]
We describe a case of polytetrafluoroethylene vascular graft interposition between the internal iliac artery and the renal artery in a live-related kidney transplant. To the best of our knowledge, we present the first case in the literature that describes the salvage of a transplant kidney using this technique. Copyright © Baskent University 2016 Printed in Turkey. All Rights Reserved.

Since the first successful organ transplant conducted between twins in 1954, kidney transplant has evolved considerably over the past 50 years. Kidney transplant plays an important role in the treatment of end-stage kidney disease to improve the quality of life and prolong the life of patients. Despite significant advances, postoperative medical and surgical complications still represent important causes of morbidity and mortality. Many problems can be avoided through prophylactic correction of abnormalities detected during the preoperative evaluation; however, it
is critical that technical mishaps at all stages of the transplant process (donor nephrectomy, benchwork preparation, and implant) be prevented and that careful postoperative monitoring be carried out, including thorough examination by attending physicians. However, despite these advances, surgical complications still present serious problems in kidney transplant recipients.

Zero-time renal transplant biopsies: A comprehensive review.
Naesens M.
Embase
Transplantation. 100 (7) (pp 1425-1439), 2016. Date of Publication: 21 Jun 2016.
[Review]
AN: 607039699
Zero-time kidney biopsies, obtained at time of transplantation, are performed in many transplant centers worldwide. Decisions on kidney discard, kidney allocation, and choice of peritransplant and posttransplant treatment are sometimes based on the histological information obtained from these biopsies. This comprehensive review evaluates the practical considerations of performing zero-time biopsies, the predictive performance of zero-time histology and composite histological scores, and the clinical utility of these biopsies. The predictive performance of individual histological lesions and of composite scores for posttransplant outcome is at best moderate. No single histological lesion or composite score is sufficiently robust to be included in algorithms for
kidney discard. Dual kidney transplantation has been based on histological assessment of zero-
time biopsies and improves outcome in individual patients, but the waitlist effects of this strategy
remain obscure. Zero-time biopsies are valuable for clinical and translational research purposes,
providing insight in risk factors for posttransplant events, and as baseline for comparison with
posttransplant histology. Themolecular phenotype of zero-time biopsies yields novel therapeutic
targets for improvement of donor selection, peritransplant management and kidney preservation.
It remains however highly unclear whether the molecular expression variation in zero-time
biopsies could become a better predictor for posttransplant outcome than donor/recipient
baseline demographic factors. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.

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20170112
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2016

344.
Robot Assisted Radical Prostatectomy in Kidney Transplant Recipients. Our Clinical Experience
and a Systematic Review.
Moreno Sierra J., Ciappara Paniagua M., Galante Romo M.I., Senovilla Perez J.L., Redondo
Gonzalez E., Galindo Herrero M.I., Novo Gomez N., Blazquez Izquierdo J.
Embase
Urologia Internationalis. 97 (4) (pp 440-444), 2016. Date of Publication: 01 Nov 2016.
[Review]
AN: 610633796
Introduction: Radical prostatectomy is a more skillful procedure in kidney graft recipients. Robotic
surgery can provide a useful minimally invasive tool. Objectives: The study aims to evaluate the
robotic-Assisted laparoscopic prostatectomy (RALP) in kidney transplant recipients, describing intra/postoperative complications, renal and oncological outcomes. Methods: This is a retrospective study conducted in a single institution of 84 RALP. Four of them were kidney transplant recipients. Side of the renal graft, clinical stage, intra/postoperative events, operating time, creatinine levels before/after intervention and oncologic follow-up were recorded. A systematic review of the literature was performed. Results: Aged 61.25 +/- 7.76 years, interval between renal transplantation and RALP: 10 +/- 3.16 years. Mean prostate specific antigen: 7.1 +/- 2.8 ng/ml, 2 patients were cT1c and 2 cT2a. Preoperative biopsies: Gleason score 3 + 3 in 3 patients, 3 + 4 in 1 patient. Charlson comorbidity index mean was 4.82 +/- 0.82. No intra/postoperative events were reported. Mean operating time: 196 +/- 20.8 min. Positive surgical margins: 2/4 patients. Pathological analysis: Gleason 3 + 4 in 2 patients and Gleason 3 + 3 in the others 2. A patient developed a bladder neck sclerosis. No differences between pre/postoperative creatinine. Three patients are free of biochemical recurrence and 1 patient required adjuvant radiotherapy. Conclusion: RALP in renal transplant recipients is a safe and feasible technique for localized prostate cancer. No difference in oncological outcomes and no impairments on renal function were found. © 2016 S. Karger AG, Basel. Copyright: All rights reserved.

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20170109
Year of Publication
2016

345.
Renal Autotransplantation at Three Academic Institutions in Turkey.
Objective: The objective of this study is to present the experience of 3 institutions performing renal autotransplantation (RAT) and to discuss surgical techniques employed and the results in the light of the medical literature. Materials and Methods: A total of 14 patients (11 male and 3 female) with a mean age of 47 +/- 8 years (35-61 years), who underwent RAT procedure at 3 different institutions between October 2006 and November 2014, in Turkey, were evaluated retrospectively. Indications for RAT procedure are ureteral avulsion, renal artery aneurysm and intimal dissection caused by percutaneous transluminal renal artery angioplasty (PTRA). Twelve patients with ureteral avulsion, 1 patient with renal artery aneurysm and 1 patient with intimal dissection caused by PTRA were followed-up for 103 months. Seven (50%) open and 7 (50%) laparoscopic nephrectomies were performed. Nine patients (64.3%) were right-sided and 5 patients (35.7%) were left-sided. Complications of grade III and above as per Clavien-Dindo classification were assessed. Results: Mean time from injury to RAT was 21.2 +/- 40.1 days. However, 5 (35.7%) patients were treated on the same day of the injury. As per Clavien-Dindo classification, 2 (14.2%) grade IVa and 1 (7.1%) grade IIIa complications were reported. However, no significant correlation was observed between the complications and graft loss regarding type and side of the nephrectomy performed (p = 0.462 and p = 0.505, respectively) and timing of the intervention (p = 0.692). Conclusion: RAT is a safe procedure in combination with minimally invasive laparoscopic technique in carefully selected patients; however, it requires expertise and proficiency in laparoscopy, reconstructive urology and transplantation. Nevertheless RAT should be considered as the last resort, when other modalities fail. © 2016 S. Karger AG, Basel. Copyright: All rights reserved.
Objective: To assess the feasibility of retroperitoneal laparoscopic nephrectomy combined with bench surgery and autotransplantation in treating complex renal tumor. Patients and Methods: Six patients with complex renal tumor were seen in our institution between 2010 and 2014. Three patients with bilateral renal cell carcinoma underwent retroperitoneal laparoscopic nephrectomy on both sides. Extracorporeal tumorectomy and renal reconstruction were performed on the side of the smaller tumor and then kidney autotransplantation was performed. The other 3 patients with tumor involving the solitary kidney underwent laparoscopic nephrectomy combined with bench surgery and autotransplantation. Result: The total time of the operation was 287 +/- 25 min; warm ischemia time 3.1 +/- 0.7 min; cold ischemia time 47 +/- 8.1 min; and kidney autotransplantation required time 86 +/- 8.6 min. Estimated blood loss was 232 +/- 45.8 ml. Serum creatinine levels were 179 +/- 44.7 mumol/l upon hospital discharge. Two patients received temporary hemodialysis. No patient needed further hemodialysis during follow-up. One patient died of multiple metastases 18 months after surgery. The other 5 patients survived without recurrence or metastasis during follow-up. Conclusions: Retroperitoneal laparoscopic radical nephrectomy combined with bench surgery and autotransplantation is a feasible choice for patients with complex renal cell carcinoma in bilateral kidneys and tumor involving the solitary kidney. © 2016 S. Karger AG, Basel. Copyright: All rights reserved.
Despite preventive methods, lymphoceles frequently form following kidney transplantation (KTx), with an incidence of 0.6%-51%. Here, we summarize the current strategies for preventing and managing this complication, and describe the approach used in our department. Rapid diagnosis and early treatment of lymphoceles through a well-defined approach can prevent or reduce the risk of organ loss. Diagnosis can be made by ultrasound, computed tomography, or magnetic resonance imaging and laparoscopic fenestration is the current therapy of choice when non-surgical methods fail. Preventive methods should be performed pre-, intra-, and post-operatively.

A peritoneal fenestration at the end of KTx seems to be a reasonable method for preventing lymphocele formation. Copyright © 2016 Elsevier Inc.

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Publisher

W.B. Saunders
Warfarin Initiation, Atrial Fibrillation, and Kidney Function: Comparative Effectiveness and Safety of Warfarin in Older Adults With Newly Diagnosed Atrial Fibrillation.
Embase
AN: 613973297
Background: The effectiveness and safety of warfarin use among patients with atrial fibrillation (AF) and reduced kidney function are uncertain. Study Design: Community-based retrospective cohort study (May 1, 2003, to March 31, 2012) using province-wide laboratory and administrative data in Alberta, Canada. Setting & Participants: 14,892 adults 66 years or older with new AF and a measurement of kidney function. Long-term dialysis patients or kidney transplant recipients were excluded. Predictor: Propensity scores were used to construct a matched-pairs cohort of patients with AF who did and did not have a warfarin prescription within a 60-day period surrounding their AF diagnosis. Outcomes: Within 1 year of initiating warfarin therapy (or the matched date for nonusers): (1) the composite of all-cause death, ischemic stroke, or transient ischemic attack (also assessed as separate end points) and (2) first hospitalization or emergency department visit for a major bleeding episode defined as an intracranial, upper or lower gastrointestinal, or other bleeding. Measurements: Baseline glomerular filtration rate (GFR) was estimated using the CKD-EPI creatinine equation. Patients were matched within estimated GFR (eGFR) categories: >=90, 60 to 89, 45 to 59, 30 to 44, and <30mL/min/1.73m2. Information for baseline characteristics (sociodemographics, comorbid conditions, and prescription drug use) was obtained. Results: Across eGFR categories, warfarin therapy initiation was associated with lower risk for the composite outcome compared to nonuse (adjusted HRs [95% CI] for eGFR categories >= 90, 60-89, 45-59, 30-44, and <30mL/min/1.73m2: 0.59 [0.35-1.01], 0.61 [0.54-0.70], 0.55 [0.47-0.65], 0.54 [0.44-0.67], and 0.64 [0.47-0.87] mL/min/1.73m2, respectively).
Compared to nonuse, warfarin therapy was not associated with higher risk for major bleeding except for those with eGFRs of 60 to 89mL/min/1.73m² (HR, 1.36; 95% CI, 1.13-1.64).

Limitations: Selection bias. Conclusions: Among older adults with AF, warfarin therapy initiation was associated with a significantly lower 1-year risk for the composite outcome across all strata of kidney function. The risk for major bleeding associated with warfarin use was increased only among those with eGFRs of 60 to 89mL/min/1.73m². Copyright © 2016 National Kidney Foundation, Inc.

349.
Adding Medicine during Machine Perfusion: A Breakthrough in Kidney Transplantation?.
Jespersen B.
Embase
Transplantation. 100 (12) (pp 2524-2525), 2016. Date of Publication: 01 Dec 2016.
[Review]
AN: 612344587
Ischemia reperfusion injury is an increasingly harmful situation in kidney transplantation. Hypothermic perfusion of renal grafts from deceased donors is implemented at many centers. This commentary addresses the possibilities of improving graft function by administering cells or pharmacological agents through renal perfusion, as shown by Hamaoui et al in this issue.

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Langenbeck's Archives of Surgery. 401 (8) (pp 1219-1229), 2016. Date of Publication: 01 Dec 2016.

[Article]

AN: 611631782

Purpose: Outcome after living donor kidney transplantation is highly relevant, since recipient and donor were exposed to notable harm. Reliable identification of risk factors is necessary. Methods: Three hundred sixty-six living donor kidney transplants were included in this observational retrospective study. Relevant risk factors for renal impairment 1 year after transplantation and delayed graft function were identified with univariable and multivariable binary logistic regression and ordinal regression analysis. Results: Eighty-four patients (26.6%) suffered from renal impairment KDIGO stage >=4 1 year post-transplant; median estimated glomerular filtration rate
was 35.3 ml/min. In multivariable ordinal regression, male recipient sex (p < 0.001), recipient body mass index (p = 0.006), donor age (p = 0.002) and high percentages of panel reactive antibodies (p = 0.021) were revealed as independent risk factors for higher KDIGO stages. After adjustment for post-transplant data, recipient male sex (p < 0.001), donor age (p = 0.026) and decreased early renal function at the first post-transplant outpatient visit (p < 0.001) were identified as independent risk factors. Delayed graft function was independently associated with long stay on the waiting list (p = 0.011), high donor body mass index (p = 0.043), prolonged warm ischemic time (p = 0.016) and the presence of preformed donor-specific antibodies (p = 0.043).

Conclusions: Broadening the donor pool with non-blood related donors seems to be legitimate, although with respect to careful medical selection, since donor age in combination with male recipient sex were shown to be risk factors for decreased graft function. Warm ischemic time and waiting time need to be kept as short as possible to avoid delayed graft function. Transplantation across HLA and ABO borders did not affect outcome significantly. Copyright © 2016, Springer-Verlag Berlin Heidelberg.

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2016
Evaluation of heparin anticoagulation protocols in post-renal transplant recipients (EHAP-PoRT study).
Ng J.C.Y., Leung M., Landsberg D.
Embase
Canadian Journal of Hospital Pharmacy. 69 (2) (pp 114-121), 2016. Date of Publication: March-April 2016.
[Conference Paper]
AN: 613732608

Background: Disturbances in hemostasis are common among renal transplant recipients. Because of the risk of thromboembolism and graft loss after transplant, a prophylactic heparin protocol was implemented at St Paul's Hospital in Vancouver, British Columbia, in 2011. Therapeutic heparin is sometimes prescribed perioperatively for patients with preexisting prothrombotic conditions. There is currently limited literature on the safety and efficacy of heparin use in the early postoperative period. Objectives: The primary objectives were to document, for patients who underwent renal transplant, the incidence of major bleeding and of thrombosis in those receiving therapeutic heparin, prophylactic heparin, and no heparin anticoagulation in the early postoperative period and to compare these rates for the latter 2 groups. The secondary objectives included a comparison of the risk factors associated with major bleeding and thrombosis. Methods: Adult patients who received a renal transplant at St Paul's Hospital between January 2008 and July 2013 were included in this retrospective cohort study. Electronic health records and databases were used to divide patients into the 3 heparin-use cohorts, to identify cases of major bleeding and thrombosis, and to characterize patients and events. The Fisher exact test was used for the primary outcome analysis, and descriptive statistics were used for all other outcomes. Results: A total of 547 patients were included in the analysis. Major bleeding was observed in 6 (46%) of the 13 patients who received therapeutic heparin; no cases of thrombosis occurred in these patients. Major bleeding occurred in 8 (3.0%) of the 266 patients who received prophylactic heparin and 9 (3.4%) of the 268 who received no heparin (p > 0.99). Thrombosis occurred in 1 (0.4%) and 3 (1.1%) of these patients, respectively (p = 0.62). Major bleeding occurred more frequently among patients with a low-target heparin protocol, but 61% of values for partial thromboplastin time were above target. A larger proportion of deceased-donor transplant recipients who had major bleeding were taking antiplatelet agents, relative to living-donor transplant recipients. Conclusion: Therapeutic use of heparin increased the risk of bleeding among renal transplant recipients, but there were no cases of thrombosis. Prophylactic use of heparin did not increase the risk of bleeding and prevented proportionately more cases of thrombosis relative to no anticoagulation; this result supports the continued use of prophylaxis.
Evolution of Living Donor Nephrectomy at a Single Center: Long-Term Outcomes with 4 Different Techniques in Greater Than 4000 Donors over 50 Years.


Embase Transplantation. 100 (6) (pp 1299-1305), 2016. Date of Publication: 01 Jun 2016.

[Article]
AN: 610202307

Background The development of minimally invasive surgical approaches to donor nephrectomy (DN) has been driven by the potential advantages for the donor, with questions remaining about long-Term outcomes. Methods All living DN performed from June 1963 through December 2014 at the University of Minnesota were reviewed. Outcomes were compared among 4 DN techniques. Results We performed 4286 DN: 2759 open DN (ODNs), 1190 hand-Assisted (HA) laparoscopic DN (LDNs), 203 pure LDN (P-LDNs), and 97 robot-Assisted-LDN. Laparoscopic DN was associated with an older (P < 0.001) and heavier (P < 0.001) donor population. Laparoscopic DN was associated with a higher probability of left kidney procurement (P < 0.001). All 3 LDN modalities required a longer operative time (P < 0.001); robot-Assisted-LDN took significantly longer than HA-LDN or P-LDN. Laparoscopic DN decreased the need for intraoperative blood transfusion (P < 0.001) and reduced the incidence of intraoperative
complications (P < 0.001) and hospital length of stay (P < 0.001). However, LDN led to a significantly higher rate of readmissions, both short-Term (<30 day, P < 0.001) and long-Term (>30 day, P < 0.001). Undergoing HA-LDN was associated with a higher rate of an incisional hernia compared with all other modalities (P < 0.001). For recipients, LDN seemed to be associated with lower rates of graft failure at 1 year compared with ODN (P = 0.002). The odds of delayed graft function increased for kidneys with multiple arteries procured via P-LDN compared with HA-LDN (OR 3 [1,10]) and ODN (OR 5 [2, 15]). Conclusions In our experience, LDN was associated with decreased donor intraoperative complications and hospital length of stay but higher rates of readmission and long-Term complications.
Background. The value of coronary artery disease (CAD) assessment and coronary intervention in the prognosis of patients who undergo renal transplantation is controversial. We investigated whether pretransplant identification of patients with CAD is helpful for defining prognosis and whether preemptive coronary intervention reduces the incidence of cardiovascular events and death after engraftment. Methods. We analyzed the impact of coronary assessment by clinical stratification and coronary angiography and of coronary intervention on prognosis in 535 chronic kidney disease patients on the transplantation waiting list who underwent renal transplantation. Results. Patients with 70% or greater narrowing experienced more coronary events than patients with less significant lesions (P = 0.01) and subjects at low risk (P = 0.001). Coronary assessment did not discriminate between the risk of death in patients with or without significant CAD, and the independent predictors of death were age (hazards ratio, 1.04; 95% confidence interval, 1.01-1.06, P = 0.001) and diabetes (hazards ratio, 1.63; 95% confidence interval, 1.11-2.39, P = 0.01). No difference occurred in events and mortality between patients treated medically or by intervention, but the severity of CAD was higher in the latter. Conclusions. Coronary assessment identified patients at increased risk of posttransplant coronary events and was also useful to define a low-risk population that may be safely transplanted without in-depth cardiovascular evaluation. However, it did not differentiate between the risk of death in patients with and those without significant CAD. Survival was similar in patients undergoing either medical or interventional treatment for CAD. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.
Virtual HLA crossmatching as a means to safely expedite transplantation of imported pancreata.
Eby B.C., Redfield R.R., Ellis T.M., Leveryor A.E., Schenian A.R., Odorico J.S.
Embase
Transplantation. 100 (5) (pp 1103-1110), 2016. Date of Publication: 2016.
[Article]
AN: 608901465

Background. Imported pancreata accumulate cold ischemia time (CIT), limiting utilization and worsening outcomes. Flow cytometric crossmatching (FXM) is a standard method to assess recipient and donor compatibility, but can prolong CIT. Single-antigen bead assays allow for detection of recipient donor-specific HLA antibodies, enabling prediction of compatibility through a virtual crossmatch (VXM). This study investigates the utility and outcomes of VXM after transplantation of imported pancreata. Methods. We retrospectively compared outcomes of 153 patients undergoing pancreas transplantation at our institution over a 3.5-year period. Results. Three patient groups were analyzed based on geographic source of the pancreas graft and the type of prospective crossmatch performed: (1) imported VXM-only, n = 39; (2) imported VXM + FXM, n = 12; and (3) local VXM + FXM, n = 102. There were no episodes of hyperacute rejection and 1 episode of early antibody-mediated rejection (<90 days) in the imported VXM group. Death-censored graft survival, patient survival, and rejection rates were comparable among the recipient groups. For pancreata imported from United Network of Organ Sharing regions 3 and 4, proceeding to surgery without an FXM reduced CIT by 5.1 hours (P < 0.001). The time from organ arrival at the hospital to operation start was significantly shorter in the VXM-only group compared with the VXM + FXM group (P < 0.001). Conclusions. Virtual crossmatch helps minimize CIT without increasing rejection or adversely affecting graft survival, making it a viable method to increase pancreas graft utilization across distant organ sharing regions. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.
Duplex Doppler ultrasound for detection of significant renal artery stenosis in transplant kidney with end to side arterial anastomosis.

Gandhi S., Patel K., Kute V., Mehta M.

Embase


[Article]

AN: 613516361

Objective To evaluate the accuracy of velocity parameters and to define optimum threshold values of these parameters in detection of >60% renal artery stenosis in patients with end to side arterial anastomosis. Methods The study group composed of 17 patients of transplant renal artery stenosis confirmed by CT angiography; and 25 control patients with normal Doppler study. Doppler parameters like PSV in main transplanted renal artery, PSV in interlobar artery, PSV in iliac artery, acceleration time, and resistive index were evaluated. Pre-PSV ratio and Post-PSV ratio were calculated. Patients were divided into group A (>60% stenosis) and B (<60% stenosis) according to CT angiography reports. Control group assigned as group C. Difference between Doppler parameters were evaluated by individual t test. Receiver operating curve was performed to determine optimal parameter for diagnosis of >60% stenosis. Results Considering better sensitivity and specificity for diagnosis of >60% stenosis the best threshold for Intrarenal RI, acceleration time, PSV, Pre-PSV ratio and Post-PSV ratio were determined to be 0.058, 0.071 s, 3.1 m/s, 2 and 10 respectively. P value of acceleration time between group B and C; and P value of PSV in main renal artery, Pre-PSV ratio and Intrarenal RI between group A and B is >0.05. Conclusion Post-PSV ratio is the best parameter for diagnosis of significant stenosis and its optimum threshold value is 10. Copyright © 2016
Surgical Complications in En Bloc Renal Transplantation.


En bloc pediatric transplantation (EBPT) began with the aim of increasing the donor pool due to the existing high demand for donors. At its inception, it was considered a type of suboptimal transplantation due to its association with a high incidence of vascular, urologic, and immunologic complications. The main objective of this study was to update information on EBPT with the largest case series that exists on a worldwide scale. In a retrospective study, the results obtained from brain-dead donors (BDDs; n = 770) were compared to those of EBPT (n = 100) from January 1990 to December 2012. The median of follow-up was 12.8 years (interquartile range 8.1
to 17.2). The variables collected for analysis were demographic factors (age and sex of recipients, age and weight of donors), renal function, graft survival, recipient survival, surgical complications (thrombosis, lymphocele, urologic complications, and renal artery stenosis and need for revascularization with angioplasty and/or stents). Subsequently in a second analysis, we studied the association between graft survival, thrombosis, angioplasty, stents, and appearance of lymphoceles with the different factors that were considered to be related in accordance with published literature and our own experience. Graft loss due to surgical complications was more frequent in EBPT than in BDD (15% vs 2.2% in BDD; P < .001), and interstitial fibrosis and tubular atrophy were more frequent in BDD (13% vs 2%; P < .001). EBPT offers a good survival rate after overcoming the possible surgical complications that may arise. Copyright © 2016 Elsevier Inc.

Current outcomes of off-pump versus on-pump coronary artery bypass grafting: Evidence from randomized controlled trials.

Embase
Journal of Thoracic Disease. 8 (pp S758-S771), 2016. Date of Publication: 2016.
[Review]
Coronary artery bypass grafting remains the standard treatment for patients with extensive coronary artery disease. Coronary surgery without use of cardiopulmonary bypass avoids the deleterious systemic inflammatory effects of the extracorporeal circuit. However there is an ongoing debate surrounding the clinical outcomes after on-pump versus off-pump coronary artery bypass (ONCAB versus OPCAB) surgery. The current review is based on evidence from randomized controlled trials (RCTs) and metaanalyses of randomized studies. It focuses on operative mortality, mid- and long-term survival, graft patency, completeness of revascularisation, neurologic and neurophysiologic outcomes, perioperative complications and outcomes in the high risk groups. Early and late survival rates for both OPCAB and ONCAB grafting are similar. Some studies suggest early poorer vein graft patency with off-pump when compared with onpump, comparable midterm arterial conduit patency with no difference in long term venous and arterial graft patency. A recent, pooled analysis of randomised trials shows a reduction in stroke rates with use of offpump techniques. Furthermore, OPCAB grafting seems to reduce postoperative renal dysfunction, bleeding, transfusion requirement and respiratory complications while perioperative myocardial infarction rates are similar to ONCAB grafting. The high risk patient groups seem to benefit from off-pump coronary surgery. Copyright © Journal of Thoracic Disease. All rights reserved.

Status
EMBASE
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The impact of donor-to-recipient gender match and mismatch on the renal function of living donor renal graft recipients. <Compatibilidad de genero entre donador y receptor puede ser un factor pronostico en la funcion del injerto de trasplante renal de donador vivo.>


Embase

Gaceta Medica de Mexico. 152 (5) (pp 645-650), 2016. Date of Publication: September-October 2016.

[Article]

AN: 613486873

Introduction: Donor-to-recipient gender match and mismatch may be a potential prognostic factor for living donor renal graft function. Methods: A retrospective review of donor-to-recipient pairs undergoing living donor kidney transplantation was done. They were classified according to gender match as: male-to-male, female-to-female, male-to-female, and female-to-male. Serum creatinine was recorded during one year for donors and for up to four years for recipients. Renal function was evaluated by estimating the glomerular filtration rate with the Chronic Kidney Disease-Epidemiology Collaboration formula. A comparative statistical analysis was performed.

Results: The analysis included 217 donor-to-recipient pairs. No significant differences across the four groups in estimated glomerular filtration rate and serum creatinine at any cut-off time point except at day one serum creatinine were found. Recipients had a significant difference in serum creatinine up to the first year of follow-up, with higher values for male recipients; no significant differences were found during the second through fourth year of follow-up. A significant difference was observed in estimated glomerular filtration rate throughout all follow-ups among the four groups, favoring female recipients of male kidneys. Conclusions: Donor-recipient mismatch may have a deleterious effect over long-term graft function. Female recipients of male kidneys have the best prognosis. Copyright © 2016, Academia Nacional de Medicina. All rights reserved.
Risk factors of acute kidney injury after orthotopic liver transplantation in China.
Yin Z., Li B., Zou F., Li H., Wang X.

In this study, we determined the risk factors for acute kidney injury (AKI) following orthotopic liver transplantation (OLT) in China. We collected 5074 donation after cardiac death (DCD) OLT recipients who underwent surgery between January 1, 2010, and December 31, 2015, in 169 academic hospitals or transplant centers in China. Univariate and multivariate analyses were used to investigate the criticality of donor, graft, or recipient variables in the development of post-OLT AKI. In all, 4482 patients were included (median age, 49.31 years). Post-OLT AKI occurred in 3.97% patients, and 73.6% of all OLT patients were male. The 1- and 5-year cumulative survival rates (CSRs) of the AKI group were 33.95% and 25.24%, respectively, compared with 86.34% and 70.05%, respectively, of the non-AKI group (P < 0.001). The independent risk factors for post-OLT AKI were blood loss, cold ischemia time, warm ischemia time, preoperative serum creatinine, the treatment period with dopamine, overexposure to calcineurin inhibitor, and combined mycophenolate mofetil use (P < 0.05). These had a high prediction accuracy for post-OLT AKI (area under the curve [AUC] = 0.740). Copyright © 2016.
Optimizing a living kidney donation program: transition to hand-assisted retroperitoneoscopic living donor nephrectomy and introduction of a passive polarizing three-dimensional display system.


Embase
[Article In Press]
AN: 612645602

Background: Optimizing a living kidney donation program is important to guarantee a high grade of acceptance among potential donors. Hand-assisted retroperitoneoscopic donor nephrectomy (HARP) is an alternative to the open anterior approach (AA) technique. Problems associated to the learning curve could hinder a transition. 3D display technique seems to ease minimally invasive surgery. Aim of this study was to evaluate the learning curve during the transition from AA to HARP and the influence of the 3D display system on the established technique.

Methods: Observational study (n = 207) during transition to HARP and introduction of 3D display technique.

Results: Operation time (OT), warm ischemia time (WIT) and blood loss (BL) of HARP decreased during transition. Pairwise group comparison for OT showed a significant learning effect for the first 30 out of 50 HARPs without influence on graft function. Between AA and HARP no significant difference in OT (133 +/- 24 vs. 127 +/- 19 min, p = 0.25) but for WIT (23 +/- 28 vs. 126 +/- 40 s, p < 0.005) and BL (328 +/- 207 vs. 54 +/- 35 ml, p < 0.005) was seen. There was neither a significant difference in donors' nor recipients' eGFR. OT (98 +/- 16 vs. 106 +/- 19 min, p = 0.036) and WIT (97 +/- 37 vs. 120 +/- 57 s, p = 0.023) were significantly shorter for the 3D technique compared to 2D. Conclusion: A transition to HARP is possible without additional risk for the donor or loss of quality for the recipient. The learning curve for HARP is steep and short. The introduction of 3D display technique after transition facilitates the surgical preparation and could further help to optimize HARP.

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Hosgood S.A., Nicholson M.L.

Embase


[Article In Press]

AN: 612433404

BACKGROUND: The measurement of urinary biomarkers during ex-vivo normothermic kidney perfusion (EVKP) may aid in the assessment of a kidney prior to transplantation. This study measured levels of neutrophil gelatinase-associated lipocalin (NGAL), kidney injury molecule-1 (KIM-1) and endothelin-1 (ET-1) during EVKP in a series of discarded human kidneys.

METHODS: Fifty six kidneys from deceased donors were recruited into the study. Each kidney underwent 60 minutes of EVKP and was scored based on the macroscopic appearance, renal blood flow and urine output. The scores ranged from 1 (least injury) to 5 (most severe). Levels of oxygen consumption, extraction, creatinine fall and fractional excretion of sodium were measured during perfusion. Urinary levels of NGAL, KIM-1 and ET-1 were measured after EVKP.
RESULTS: Thirty eight kidneys had an EVKP score of 1 or 2, 8 a score of 3 and 10 a score of 4 or 5. During EVKP lower levels of oxygen consumption, higher oxygen extraction, a lower decrement of serum creatinine and higher levels of NGAL and ET-1 were associated with a higher EVKP score (P<0.05). These parameters were also associated with a raised creatinine level in the donor before organ retrieval. Levels of KIM-1 were not associated with the perfusion parameters (P=0.649) or renal function in the donor (R=0.02458; P=0.271). CONCLUSION: The measurement of urinary biomarkers, particularly NGAL in combination with functional perfusion parameters and the EVKP score provides an informative measure of kidney quality which may aid the decision to transplant the kidney. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.

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ARTICLE IN PRESS

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362.
CT volumetry is superior to nuclear renography for prediction of residual kidney function in living donors.
Clinical Transplantation. (no pagination), 2016. Date of Publication: 2016.
[Article In Press]
Living kidney donor evaluation commonly includes nuclear renography to assess split kidney function and computed tomography (CT) scan to evaluate anatomy. To streamline donor workup and minimize exposure to radioisotopes, we sought to assess the feasibility of using proportional kidney volume from CT volumetry in lieu of nuclear renography. We examined the correlation between techniques and assessed their ability to predict residual postoperative kidney function following live donor nephrectomy. In a cohort of 224 live kidney donors, we compared proportional kidney volume derived by CT volumetry with split kidney function derived from nuclear renography and found only modest correlation (left kidney $R^2=26.2\%$, right kidney $R^2=26.7\%$). In a subset of 88 live kidney donors with serum creatinine measured 6 months postoperatively, we compared observed estimated glomerular filtration rate (eGFR) at 6 months with predicted eGFR from preoperative imaging. Compared to nuclear renography, CT volumetry more closely approximated actual observed postoperative eGFR for Chronic Kidney Disease Epidemiology Collaboration (J-test: $P=.02$, Cox-Pesaran test: $P=.01$) and Mayo formulas (J-test: $P=.004$, Cox-Pesaran test: $P<.001$). These observations support the use of CT volumetry for estimation of split kidney function in healthy individuals with normal kidney function and morphology. Copyright © 2016 John Wiley & Sons A/S.
High mortality in diabetic recipients of high KDPI deceased donor kidneys.
Pelletier R.P., Pesavento T.E., Rajab A., Henry M.L.
Embase
Clinical Transplantation. (no pagination), 2016. Date of Publication: 2016.
[Article In Press]
AN: 611220088

Background: Deceased donor (DD) kidney quality is determined by calculating the Kidney Donor Profile Index (KDPI). Optimizing high KDPI (>=85%) DD transplant outcome is challenging. This retrospective study was performed to review our high KDPI DD transplant results to identify clinical practices that can improve future outcomes. Methods: We retrospectively calculated the KDPI for 895 DD kidney recipients transplanted between 1/2002 and 11/2013. Age, race, body mass index (BMI), retransplantation, gender, diabetes (DM), dialysis time, and preexisting coronary artery disease (CAD) (previous myocardial infarction (MI), coronary artery bypass (CABG), or stenting) were determined for all recipients. Results: About 29.7% (266/895) of transplants were from donors with a KDPI >=85%. By Cox regression older age, diabetes, female gender, and dialysis time >4 years correlated with shorter patient survival time. Diabetics with CAD who received a high KDPI donor kidney had a significantly increased risk of death (HR 4.33 (CI 1.82-10.30), P=.001) compared to low KDPI kidney recipients. The Kaplan-Meier survival curve for diabetic recipients of high KDPI kidneys was significantly worse if they had preexisting CAD (P<.001 by log-rank test). Conclusion: Patient survival using high KDPI donor kidneys may be improved by avoiding diabetic candidates with preexisting CAD. Copyright © 2016 John Wiley & Sons A/S.

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2016
BACKGROUND: Organ shortage persists despite a high rate of donation after circulatory death (DCD) in the Netherlands. The median waiting time for a deceased donor kidney in 2013 was 3.5 years. Most DCD kidneys are from controlled DCD (cDCD; Maastricht category III). Experience with uncontrolled donors after cardiac death (uDCD), that is, donors with an unexpected and irreversible cardiac arrest (Maastricht categories I and II), is increasing; and its effect on transplant outcomes needs evaluation. METHODS: We used the Dutch Organ Transplantation Registry to include recipients (>=18 years old) from all Dutch centers who received transplants from 2002 to 2012 with a first DCD kidney. We compared transplant outcome in uDCD (n = 97) and cDCD (n = 1441). RESULTS: Primary nonfunction in uDCD was higher than in the cDCD (19.6% vs 9.6%, P < 0.001, respectively). Delayed graft function was also higher in uDCD than in cDCD, but not significantly (73.7% vs 63.3%, P = .074, respectively). If censored for primary nonfunction, estimated glomerular filtration rates after 1 year and 5 years were comparable between uDCD and cDCD (1 year: uDCD, 44.3 (23.4) mL/min/m and cDCD, 45.8 (24.1) mL/min/m; P = 0.621; 5 years: uDCD, 49.1 (25.6) mL/min/m and cDCD, 47.7 (21.7) mL/min/m; P = 0.686). The differences in primary nonfunction between kidneys from uDCD and cDCD were explained by differences in the first warm ischemic period, cold ischemic time, and donor age. CONCLUSIONS: We conclude that uDCD kidneys have potential for excellent function and can constitute a valuable extension of the donor pool. However, further efforts are necessary to address the high rate of primary nonfunction. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.
365.
Alloantibody Responses After Renal Transplant Failure Can Be Better Predicted by Donor-Recipient HLA Amino Acid Sequence and Physicochemical Disparities Than Conventional HLA Matching.
Kosmoliaptsis V., Mallon D.H., Chen Y., Bolton E.M., Bradley J.A., Taylor C.J.
Embase
[Article In Press]
AN: 608821204
We have assessed whether HLA immunogenicity as defined by differences in donor-recipient HLA amino-acid sequence (amino-acid mismatch score, AMS; and eplet mismatch score, EpMS) and physicochemical properties (electrostatic mismatch score, EMS) enables prediction of allosensitization to HLA, and also prediction of the risk of an individual donor-recipient HLA mismatch to induce donor-specific antibody (DSA). HLA antibody screening was undertaken
using single-antigen beads in 131 kidney transplant recipients returning to the transplant waiting list following first graft failure. The effect of AMS, EpMS, and EMS on the development of allosensitization (calculated reaction frequency [cRF]) and DSA was determined. Multivariate analyses, adjusting for time on the waiting list, maintenance on immunosuppression after transplant failure, and graft nephrectomy, showed that AMS (odds ratio [OR]: 1.44 per 10 units, 95% CI: 1.02-2.10, p = 0.04) and EMS (OR: 1.27 per 10 units, 95% CI: 1.02-1.62, p = 0.04) were independently associated with the risk of developing sensitization to HLA (cRF > 15%). AMS, EpMS, and EMS were independently associated with the development of HLA-DR and HLA-DQ DSA, but only EMS correlated with the risk of HLA-A and -B DSA development. Differences in donor-recipient HLA amino-acid sequence and physicochemical properties enable better assessment of the risk of HLA-specific sensitization than conventional HLA matching. Copyright © 2016 The American Society of Transplantation and the American Society of Transplant Surgeons.

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366.

Post-bone marrow transplant thrombotic microangiopathy.

Obut F., Kasinath V., Abdi R.

Embase

Bone Marrow Transplantation. 51 (7) (pp 891-897), 2016. Date of Publication: 01 Jul 2016.

[Review]
Thrombotic microangiopathy (TMA) is a systemic disease characterized by microangiopathic hemolytic anemia, thrombocytopenia and organ failure. Post-bone marrow transplant TMA (post-BMT TMA) is a life-threatening condition that has been reported to afflict between 0.5 and 63.6% of BMT patients. The incidence of post-BMT TMA is affected by evolving therapies such as conditioning regimens. The etiology of post-BMT TMA is thought to be multifactorial, including the effects of immunosuppressive agents, viral infections, TBI and GvHD. A growing body of evidence highlights the importance of complement system activation and endothelial damage in post-BMT TMA. Although plasmapheresis has commonly been used, its therapeutic rationale for the majority of post-BMT TMA cases is unclear in the absence of circulatory inhibitors. It has become possible to target complement activation with eculizumab, a drug that blocks the terminal complement pathway. Early studies have highlighted the importance of anti-complement therapies in treating post-BMT TMA. Moreover, finding complement gene mutations may identify patients at risk, but whether such patients benefit from prophylactic anti-complement therapies before BMT remains to be studied. This review focuses on diagnostic criteria, pathophysiology, treatment and renal outcomes of post-BMT TMA. Copyright © 2016 Macmillan Publishers Limited.

Implementation and Results of a Percutaneous Renal Allograft Biopsy Protocol to Reduce Complication Rate.
Li C.H., Traube L.E., Lu D.S., Raman S.S., Danovitch G.M., Gritsch H.A., McWilliams J.P.
Percutaneous renal transplant biopsy (PRTB) is the gold standard for evaluating allograft rejection after renal transplant. Hemorrhage is the predominant complication. We describe the implementation of a standardized protocol for PRTB at a single institution, with the aim of reducing bleeding complications. Utilizing the plan-do-study-act model for quality improvement, we created and deployed a protocol centered on controlling patient's hypertension, platelet function, and anticoagulation status. The 4-year study encompassed a total of 880 PRTBs, before and after implementation of the protocol. Total complication rate, which was 5.8% in the 2 years leading up to implementation of the protocol, was reduced to 2.9% after the protocol was introduced (P =.04). A standardized approach to PRTB can potentially lower complication rates; we present a framework for implementing a quality improvement protocol at other institutions.

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Management of Thrombotic Microangiopathic Hemolytic Anemias with Therapeutic Plasma Exchange When It Works and When It Does Not.
Mehmood T., Taylor M., Winters J.L.
Embase
Hematology/Oncology Clinics of North America. 30 (3) (pp 679-694), 2016. Date of Publication: 01 Jun 2016.
[Review]
AN: 609470740
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369.
Clinical management of the uraemic syndrome in chronic kidney disease.
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The Lancet Diabetes and Endocrinology. 4 (4) (pp 360-373), 2016. Date of Publication: 01 Apr 2016.
[Review]
AN: 608793384
The clinical picture of the uraemic syndrome is a complex amalgam of accelerated ageing and organ dysfunction, which progress in parallel to chronic kidney disease. The uraemic syndrome is associated with cardiovascular disease, metabolic bone disease, inflammation, protein energy wasting, intestinal dysbiosis, anaemia, and neurological and endocrine dysfunction. In this Review, we summarise specific, modern management options for the uraemic syndrome in chronic kidney disease. Although large randomised controlled trials are scarce, based on data from randomised controlled trials and observational studies, as well as pathophysiological reasoning, a therapeutic algorithm can be developed for this complex and multifactorial condition, with interventions targeting several modifiable factors simultaneously. Copyright © 2016 Elsevier Ltd.

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370.
Dual kidney transplants from adult marginal donors successfully expand the limited deceased donor organ pool.
Embase
Clinical Transplantation. 30 (4) (pp 380-392), 2016. Date of Publication: 01 Apr 2016.
[Article]
AN: 608719571
Background: The need to expand the organ donor pool remains a formidable challenge in kidney transplantation (KT). The use of expanded criteria donors (ECDs) represents one approach, but kidney discard rates are high because of concerns regarding overall quality. Dual KT (DKT) may reduce organ discard and optimize the use of kidneys from marginal donors. Study design: We conducted a single-center retrospective review of outcomes in adult recipients of DKTs from adult marginal deceased donors (DD) defined by limited renal functional capacity. If the calculated creatinine clearance in an adult DD was <65 mL/min, then the kidneys were transplanted as a DKT. Results: Over 11.5 yr, 72 DKTs were performed including 45 from ECDs, 17 from donation after cardiac death (DCD) donors, and 10 from standard criteria donors (SCD). Mean adult DD and recipient ages were both 60 yr, including 29 DDs and 26 recipients >=65 yr of age. Mean pre-DKT waiting and dialysis vintage times were 12 months and 25 months, respectively. Actual
patient and graft survival rates were 84.7% and 70.8%, respectively, with a mean follow-up of 58 months. One yr and death-censored graft survival rates were 90% and 80%, respectively. Outcomes did not differ by DD category, recipient age, or presence of delayed graft function (DGF). Eleven patients died at a mean of 32 months post-DKT (eight with functioning grafts) and 13 other patients experienced graft losses at a mean of 33 months. The incidence of DGF was 25%; there were two cases (2.8%) of primary non-function. Mean length of initial hospital stay was 7.2 d. Mean serum creatinine and glomerular filtration rate levels at 12 and 24 months were 1.5 and 53 and 1.5 mg/dL and 51 mL/min/1.73 m², respectively. DKT graft survival and function were superior to concurrent single ECD and similar to concurrent SCD KTIs. Two patients underwent successful kidney retransplantation, so the dialysis-free rate in surviving patients was 87%. The proportion of total renal function transplanted from adult DD to DKT recipients was 77% compared to 56% for patients receiving single KTIs. Conclusions: Dual kidney transplantation using kidneys from adult marginal DDs that otherwise might be discarded offer a viable option to counteract the growing shortage of acceptable single kidneys. Excellent medium-term outcomes can be achieved and waiting times can be reduced in a predominantly older recipient population.

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Long-term Effects of Off-Pump Coronary Bypass Versus Conventional Coronary Bypass Grafting on Renal Function.
Hynes C.F., Colo S., Amdur R.L., Chawla L.S., Greenberg M.D., Trachiotis G.D.


[Article]
AN: 608561065

Objective: This study aimed to evaluate the short- and long-term effects of conventional on-pump coronary bypass grafting (cCABG) compared with off-pump coronary artery bypass (OPCAB) on renal function. Methods: A retrospective review of patients undergoing coronary bypass grafting from 2004 through 2013 at a single center was conducted. Preoperative renal function, perioperative acute kidney injury, and long-term glomerular filtration were evaluated. Multivariable analyses were used to determine factors contributing to short- and long-term renal impairment.

Results: A total of 234 patients underwent cCABG, and 582 underwent OPCAB. Patients undergoing OPCAB were significantly older, had greater preoperative renal dysfunction, had greater functional dependence, and took more hypertension medications. Multivariable analyses found that 30-day acute kidney injury was an independent risk factor for a 10% decline in glomerular filtration rate at 1 and 5 years (P < 0.0001 and 0.002, respectively). However, the use of cardiopulmonary bypass was not found to influence long-term renal function (P = 0.78 at 1 year, P = 0.76 at 5 years). The percentage of patients experiencing a 10% drop in renal function from baseline at 1 year (33% OPCAB, 35% cCABG; P = 0.73) and 5 years (16% OPCAB, 16% cCABG; P = 0.93) were not significantly different. Independent predictors of acute kidney injury included baseline kidney function (P = 0.04) and age (P < 0.0001), whereas cardiopulmonary bypass did not affect the incidence (P = 0.17). A propensity-matched analysis confirmed these findings. Conclusions: Acute kidney injury is a risk factor for long-term renal dysfunction after either bypass method and was not greater after cCABG compared with OPCAB. Patients undergoing OPCAB did not experience greater decrease in long-term kidney function despite having worse baseline kidney function. Copyright © 2016 by the International Society for Minimally Invasive Cardiothoracic Surgery.

Status
Embase
Institution
The pathobiology of pig-to-primate xenotransplantation: A historical review.

Cooper D.K.C., Ezzelarab M.B., Hara H., Iwase H., Lee W., Wijkstrom M., Bottino R.

Embase

Xenotransplantation. 23 (2) (pp 83-105), 2016. Date of Publication: 01 Mar 2016.

[Review]

AN: 608115576

The immunologic barriers to successful xenotransplantation are related to the presence of natural anti-pig antibodies in humans and non-human primates that bind to antigens expressed on the transplanted pig organ (the most important of which is galactose-alpha1,3-galactose [Gal]), and activate the complement cascade, which results in rapid destruction of the graft, a process known as hyperacute rejection. High levels of elicited anti-pig IgG may develop if the adaptive immune response is not prevented by adequate immunosuppressive therapy, resulting in activation and injury of the vascular endothelium. The transplantation of organs and cells from pigs that do not express the important Gal antigen (alpha1,3-galactosyltransferase gene-knockout [GTKO] pigs) and express one or more human complement-regulatory proteins (hCRP, e.g., CD46, CD55), when combined with an effective costimulation blockade-based immunosuppressive regimen,
prevents early antibody-mediated and cellular rejection. However, low levels of anti-non-Gal antibody and innate immune cells and/or platelets may initiate the development of a thrombotic microangiopathy in the graft that may be associated with a consumptive coagulopathy in the recipient. This pathogenic process is accentuated by the dysregulation of the coagulation-anticoagulation systems between pigs and primates. The expression in GTKO/hCRP pigs of a human coagulation-regulatory protein, for example, thrombomodulin, is increasingly being associated with prolonged pig graft survival in non-human primates. Initial clinical trials of islet and corneal xenotransplantation are already underway, and trials of pig kidney or heart transplantation are anticipated within the next few years. Copyright © 2016 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd.

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373.
Complications of Ultrasound-Guided Renal Transplant Biopsies.
Embase
American Journal of Transplantation. 16 (4) (pp 1298-1305), 2016. Date of Publication: 01 Apr 2016.
[Article]
AN: 608060614
Renal transplant biopsies to diagnose transplant pathology are routinely performed using ultrasound guidance. Few large studies have assessed the rate and risk factors of major biopsy complications. This study is a single-center 5-year retrospective cohort analysis of 2514 biopsies. Major complications occurred in 47 of 2514 patients (1.9%) and included hospitalization, transfusion of blood products, operative exploration and interventional radiology procedures. The complication rate among "cause" biopsies was significantly higher than in "protocol" biopsies (2.7% vs. 0.33%, p < 0.001). Complications presented on postbiopsy days 0-14, with the majority diagnosed on the same day as the biopsy and manifested by hematocrit drop, although the presence of such delayed presentation of complications occurring >24 h after the biopsy on days 2-14 is previously unreported. Specific patient characteristics associated with increased risk of a complication were increased age and blood urea nitrogen, decreased platelet count, history of prior renal transplant, deceased donor transplant type and use of anticoagulant medications but not aspirin. © Copyright 2015 The American Society of Transplantation and the American Society of Transplant Surgeons.

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374.
Cardiovascular Risk Assessment and Management in Prerenal Transplantation Candidates.
Cardiovascular (CV) assessment in prerenal transplant patients varies by center. Current guidelines recommend stress testing for candidates if >=3 CV risk factors exist. We evaluated the CV assessment and management in 685 patients referred for kidney transplant over a 7-year period. All patients had CV risk factors, and the most common cause of end-stage renal disease was diabetes. Thirty-three percent (n = 229) underwent coronary angiography. The sensitivity of stress testing to detect obstructive coronary artery disease (CAD) was poor (0.26). Patients who had no CAD, nonobstructive CAD, or CAD with intervention had significantly higher event-free survival compared with patients with obstructive CAD without intervention. There were no adverse clinical events (death, myocardial infarction, stroke, revascularization, and graft failure) within 30 days post-transplant in patients who had preoperative angiography (n = 77). Of the transplanted patients who did not have an angiogram (n = 289), there were 8 clinical events (6 myocardial infarctions) in the first 30 days. In conclusion, our results indicate that stress testing and usual risk factors were poor predictors of obstructive CAD and that revascularization may prove beneficial in these patients. Copyright © 2016 Elsevier Inc.
The development and current status of minimally invasive surgery to manage urological complications after renal transplantation.


Indian Journal of Urology. 32 (3) (pp 186-191), 2016. Date of Publication: July-September 2016. [Review]
AN: 611250397

Introduction: In the past, urological complications after renal transplantation were associated with significant morbidity. With the development and application of endourological procedures, it is now possible to manage these cases with minimally invasive techniques. Materials and Methods: A MEDLINE search for articles published in English using key words for the management of urological complications after renal transplantation was undertaken. Forty articles were selected and reviewed. Results: The incidence of urological complications postrenal transplantation was reported to be 2-13%. Ureteric leaks occurred in up to 8.6%, and 55% were managed endourologically. The incidence of lymphocele was as high as 20%, and less that 12% of the cases required treatment. Ureteric stricture was the most common complication, and endourological management was successful in 50-70%. The occurrence of complicated vesicoureteral reflux was 4.5%, and 90% of low-grade reflux cases were successfully treated with deflux injections. Stones and obstructive voiding dysfunction occurred in about 1% of kidney transplant recipients. Conclusion: Minimally invasive techniques have a critical role in the management of urological complications after renal transplantation. Urinary leakage should be managed with complete decompression. Percutaneous drainage should be the first line of treatment for lymphocele that is symptomatic or causing ureteric obstruction. Laparoscopic lymphocele deroofing is successful in aspiration-resistant cases. Deflux is highly successful for the management of complicated low-grade kidney transplant reflux. The principles of stone management in a native solitary kidney are applied to the transplanted kidney. Early identification and treatment of bladder outlet obstruction after renal transplantation can prevent urinary leakage and obstructive uropathy. Copyright © 2016 Indian Journal of Urology

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Vitamin D in Kidney Transplant Recipients: Mechanisms and Therapy.
Cianciolo G., Galassi A., Capelli I., Angelini M.L., Manna G.L., Cozzolino M.
Embase
American Journal of Nephrology. 43 (6) (pp 397-407), 2016. Date of Publication: 01 Jul 2016.
[Review]
AN: 611175518
Chronic kidney disease-mineral and bone disorder (CKDMBD) is common in kidney transplant recipients (KTRs), where secondary hyperparathyroidism (HPTH) and posttransplantation bone disease (PTBD) are potential effectors of both graft and vascular aging. Reduced 25(OH)D levels are highly prevalent in KTRs. Experimental and clinical evidence support the direct involvement of deranged vitamin D metabolism in CKD-MBD among KTRs. This review analyzes the pathophysiology of vitamin D derangement in KTRs and its fall out on patient and graft outcome, highlighting the roles of both nutritional and active vitamin D compounds to treat PTBD, cardiovascular disease (CVD) and graft dysfunction. Fibroblast growth factor-23-parathyroid hormone (PTH)-vitamin D axis, immunosuppressive therapy and previous bone status have been associated with PTBD. Although several studies reported reduced PTH levels in KTRs receiving nutritional vitamin D, its effects on bone mineral density (BMD)
Alloantibody Responses After Renal Transplant Failure Can Be Better Predicted by Donor-Recipient HLA Amino Acid Sequence and Physicochemical Disparities Than Conventional HLA Matching.

Kosmoliaptsis V., Mallon D.H., Chen Y., Bolton E.M., Bradley J.A., Taylor C.J.

Embase
American Journal of Transplantation. 16 (7) (pp 2139-2147), 2016. Date of Publication: 01 Jul 2016.

[Article]
AN: 611043498

We have assessed whether HLA immunogenicity as defined by differences in donor-recipient HLA amino-acid sequence (amino-acid mismatch score, AMS; and eplet mismatch score, EpMS) and physicochemical properties (electrostatic mismatch score, EMS) enables prediction of allosensitization to HLA, and also prediction of the risk of an individual donor-recipient HLA mismatch to induce donor-specific antibody (DSA). HLA antibody screening was undertaken using single-antigen beads in 131 kidney transplant recipients returning to the transplant waiting list following first graft failure. The effect of AMS, EpMS, and EMS on the development of allosensitization (calculated reaction frequency [cRF]) and DSA was determined. Multivariate analyses, adjusting for time on the waiting list, maintenance on immunosuppression after
transplant failure, and graft nephrectomy, showed that AMS (odds ratio [OR]: 1.44 per 10 units, 95% CI: 1.02-2.10, p = 0.04) and EMS (OR: 1.27 per 10 units, 95% CI: 1.02-1.62, p = 0.04) were independently associated with the risk of developing sensitization to HLA (cRF > 15%). AMS, EpMS, and EMS were independently associated with the development of HLA-DR and HLA-DQ DSA, but only EMS correlated with the risk of HLA-A and -B DSA development. Differences in donor-recipient HLA amino-acid sequence and physicochemical properties enable better assessment of the risk of HLA-specific sensitization than conventional HLA matching.  Copyright © 2016 The Authors. American Journal of Transplantation published by Wiley Periodicals, Inc. on behalf of the American Society of Transplantation and the American Society of Transplant Surgeons

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378.
Current Paradigm for Ischemia in Kidney Surgery.
Mir M.C., Pavan N., Parekh D.J.
Embase
[Review]
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Purpose: Partial nephrectomy is the accepted standard of care for treatment of patients with small renal masses. The primary goal while performing partial nephrectomy is cancer control with a secondary important goal of maximizing renal function preservation with minimal perioperative morbidity. Recent studies have highlighted the importance of renal parenchymal quality and quantity postoperatively rather than duration of ischemia in determining long-term renal function. We review the available data regarding perioperative renal function optimization with special interest in ischemia during partial nephrectomy, highlighting the controversies and establishing future lines of investigation.

Materials and Methods: We performed a comprehensive literature review for the years 1970 to 2014 via MEDLINE, PubMed, and the Cochrane Library. Review was consistent with the PRISMA (Preferred Reporting Items for Systemic Reviews and Meta-Analyses) criteria. We used MeSH (Medical Subject Headings) terms for the search including "acute kidney injury/failure," "carcinoma, renal cell/carcinoma of kidney/neoplasm of kidney," "kidney failure, chronic/end-stage kidney disease," "ischemia-reperfusion" and "warm ischemia/cold ischemia." Relevant review articles were included. Abstracts from major urological/surgical conferences were reviewed. All studies included were performed in adults, were written in English and had an abstract available.

Results: Our traditional knowledge of renal ischemia is derived from animal studies, i.e., kidney transplant and retrospective partial nephrectomy series that indicate the risk of renal function impairment for every minute of ischemia. Careful evaluation of historical studies highlights flaws of the use of ischemia duration as a dichotomous marker (25 or 30 minutes) while predicting renal function outcomes. Recent studies have revealed no effect of duration of ischemia on ultimate kidney function in the short or long term. Quality and quantity of parenchyma preserved postoperatively are key predictors of ultimate renal function after partial nephrectomy. Traditionally partial nephrectomy has been performed with hilar occlusion to provide a relatively bloodless surgical field allowing effective oncologic control during tumor excision with secure management of blood vessels, collecting system and renal reconstruction. Selective clamping and nonclamping techniques have been proposed to avoid the perceived harmful effects of ischemia, although they convert a complex surgery into a more challenging procedure, potentially limiting the widespread use of partial nephrectomy for management of renal cancers. Promising urine and blood-based biomarkers (NGAL, KIM-1) in the context of critical care settings and global stress have been observed to predict acute kidney injury. Within the partial nephrectomy environment the usefulness of those markers needs to be further investigated. To date, no study has proved their usefulness in the setting of partial nephrectomy.

Conclusions: Based on the available evidence, use of a single cutoff for duration of ischemia time as a dichotomous value for renal function outcomes in the setting of partial nephrectomy is flawed. Renal ischemia is a controversial topic with a shifted paradigm within the last decade. Current evidence has shown that patients with 2 kidneys undergoing nephron sparing surgery can tolerate ischemia times of more than 30 minutes without
a clinically significant decline in renal function. Biomarkers predictive of renal tubular injury fail to predict acute kidney injury in the context of partial nephrectomy. Indications for partial nephrectomy could be significantly expanded as the safety of limited renal ischemia is now better understood.

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2016

Clinical and safety outcomes of laparoscopic nephrectomy with renal autotransplantation for the loin pain-hematuria syndrome: a 14-year longitudinal cohort study.
Zubair A.S., Cheungpasitporn W., Erickson S.B., Prieto M.

Embase
Journal of Evidence-Based Medicine. 9 (2) (pp 84-90), 2016. Date of Publication: 01 May 2016.

[Article]
AN: 610903987

Objective: The objective of this study is to assess clinical and safety outcomes after laparoscopic nephrectomy with autotransplantation for loin pain-hematuria syndrome (LPHS). Methods: We conducted telephone interviews using structured questionnaires and retrospectively reviewed data on all patients who underwent laparoscopic nephrectomy with autotransplantation for LPHS between January 2000 and May 2014. Results: A total of 24 laparoscopic nephrectomies with renal autotransplantation of 21 patients with LPHS were reviewed. Eighty-three per cent were female with a mean age of 31 years. Postoperatively, graft loss resulting in subsequent nephrectomy occurred in two patients; However, no patients died (median follow-up = 22 months,
range 5 to 78 months) or required dialysis (median follow-up = 10 months, range 0.2 to 178 months). There was no significant difference in estimated glomerular filtration rate (eGFR) before and after surgery (100 +/- 22 vs. 97 +/- 23 mL/min/1.73 m2; P = 0.37). Among 14 patients (16 autotransplantation) with telephone follow-up, 14 (88%) resulted in pain relief and no operation resulted in worsening pain. All procedures resulted in immediate pain relief; pain recurrence was reported after two procedures. However, those patients had pain-free period up to 36 months. The quality of life was better after 15 (94%) autotransplantation with higher employment rate (44% vs. 69%; P = 0.04). Two patients with graft loss reported better pain control and quality of life. Conclusions: Renal autotransplantation is a possible treatment option for LPHS refractory to conservative medical treatment. It can offer pain relief and better quality of life. Despite postoperative risk, it seems to be safe for survival and renal outcomes. Copyright © 2016 Chinese Cochrane Center, West China Hospital of Sichuan University and John Wiley & Sons Australia, Ltd

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380.
Lupus nephritis management guidelines compared.
Wilhelmus S., Bajema I.M., Bertsias G.K., Boumpas D.T., Gordon C., Lightstone L., Tesar V., Jayne D.R.
Embase
In the past years, many (randomized) trials have been performed comparing the treatment strategies for lupus nephritis. In 2012, these data were incorporated in six different guidelines for treating lupus nephritis. These guidelines are European, American and internationally based, with one separate guideline for children. They offer information on different aspects of the management of lupus nephritis including induction and maintenance treatment of the different histological classes, adjunctive treatment, monitoring of the patient, definitions of response and relapse, indications for (repeat) renal biopsy, and additional challenges such as the presence of vascular complications, the pregnant SLE patient, treatment in children and adolescents and considerations about end-stage renal disease and transplantation. In this review, we summarize the guidelines, determine the common ground between them, highlight the differences and discuss recent literature. Copyright © 2015 The Author 2015. Published by Oxford University Press on behalf of ERA-EDTA. All rights reserved.
Pro: ACE Inhibitors Should Be Continued Perioperatively and Prior to Cardiovascular Operations.
Bhatia M., Arora H., Kumar P.A.
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Journal of Cardiothoracic and Vascular Anesthesia. 30 (3) (pp 816-819), 2016. Date of Publication: 01 Jun 2016.
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Impaired P2Y12 inhibition by clopidogrel in kidney transplant recipients: Results from a cohort study.
Muller C., Messas N., Perrin P., Olagne J., Gautier-Vargas G., Cognard N., Caillard S., Moulin B., Morel O.
Embase
Background: Cardiovascular complications represent a major cause of morbidity and mortality for patients who received kidney transplantation (KT). However, the impact of KT and chronic immunosuppression on platelet response to clopidogrel in patients undergoing coronary or peripheral revascularization procedures remains unclear. This cohort study compares platelet responsiveness to clopidogrel as assessed by vasodilator-stimulated phosphoprotein (VASP) phosphorylation. Methods: The study population was divided between chronic kidney disease (CKD) patients who underwent KT (n = 36) and non-transplanted CKD patients (control group, n = 126). Patients were on maintenance antiplatelet therapy with clopidogrel 75 mg daily for at least 8 days. The mean platelet reactivity index (PRI) VASP values and the prevalence of high on-treatment platelet reactivity (HPR, defined as PRI VASP >= 61 %) were compared. Results: The mean PRI VASP value was significantly higher in the transplant group (60.1 +/- 3 vs 51.2 +/- 1.6 %; p = 0.014). HPR was significantly more common in the transplant group on clopidogrel maintenance therapy (58 vs. 31 %; p = 0.011). KT was the only independent predictor of HPR (odds ratio: 2.6; 95 % confidence interval: 1.03-6.27, p = 0.03). The effect of treatment with calcineurin inhibitors on clopidogrel response could not be analyzed separately from the kidney transplant status. Conclusions: KT is associated with an increased prevalence of HPR. Our results suggest that platelet function tests may be clinically useful for the management of this specific population. Copyright © 2016 The Author(s).

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Publisher
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Background For the purpose of building best practice guidelines, an international expert panel was surveyed in 2014 and compared with the 2011 Sleeve Gastrectomy Consensus and with survey data culled from a general surgeon audience. Objectives To measure advancement on aspects of laparoscopic sleeve gastrectomy and identify current best practices. Setting International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) 2014, Fifth International Summit for Laparoscopic Sleeve Gastrectomy, Montreal, Canada. Methods In August 2014, expert surgeons (based on having performed >1000 cases) completed an online anonymous survey. Identical survey questions were then administered to general surgeon attendees. Results One hundred twenty bariatric surgeons completed the expert survey, along with 103 bariatric surgeons from IFSO 2014 general surgeon audience. The following indications were endorsed: as a stand-alone procedure (97.5%); in high-risk patients (92.4%); in kidney and liver transplant candidates (91.6%); in patients with metabolic syndrome (83.8%); body mass index 30-35 with associated co-morbidities (79.8%); in patients with inflammatory bowel disease (87.4%); and in the elderly (89.1%). Significant differences existed between the expert and general surgeons groups in endorsing several contraindications: Barrett's esophagus (80.0% versus 31.3% [P<.001]), gastroesophageal reflux disease (23.3% versus 52.5% [P<.001]), hiatal hernias (11.7% versus 54.0% [P<.001]), and body mass index>60 kg/m2 (5.0% versus 28.0% [P<.001]). Average reported weight loss outcomes 5 years postoperative were significantly higher for the expert surgeons group (P =.005), as were reported stricture (P =.001) and leakage (P =.005) rates. The following significant differences exist between 2014 and 2011 expert surgeons:
Patients with gastroesophageal reflux disease should have pH and manometry study pre-
laparoscopic sleeve gastrectomy (32.8% versus 50.0%; P =.033); it is important to take down the
vessels before resection (88.1% versus 81.8%; P =.025); it is acceptable to buttress (81.4%
versus 77.3%; P<.001); the smaller the bougie size and tighter the sleeve, the higher the
incidence of leaks (78.8% versus 65.2%; P =.006). Conclusion This study highlights areas of new
and improved best practices on various aspects of laparoscopic sleeve gastrectomy performance
among experts from 2011 and 2014 and among the current general surgeon population.

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384.
Innovative Applications of Robotic Surgery: Renal Allograft and Autologous Transplantation.
Lee J., Ordon M.
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Robotic surgery has enabled surgeons to offer more patients a minimally invasive surgical option
in the management of their complex diseases. While renal transplantation is associated with
significant improvements in quantity and quality of life for most end-stage renal disease (ESRD)
patients, it is also not devoid of its surgical risks and potential morbidities. Robotic-assisted
Kidney transplantation is a recently described, innovative application of the robotic surgery platform, and early experiences suggest that it is associated with comparable graft function and lower rates of complications. Urinary tract obstruction, though less common than ESRD, can be a serious threat to renal function. Severe ureteric stricture disease can represent a clinically complex problem requiring major reconstructive surgery. Completely intra-corporeal robotic renal auto-transplantation is another innovative application of the robotic surgery platform and represents a significant advancement in urologic surgery. Initial reports of this procedure demonstrate safety, feasibility, and excellent renal function outcomes.

**References**

Fronek J. European Surgery - Acta Chirurgica Austriaca. 48 (pp 130-134), 2016. Date of Publication: 01 May 2016.

AN: 610467771

Background: Solid organ transplants, e. g., kidney, pancreas, and liver, are well-established transplant methods at the Institute for Clinical and Experimental Medicine (IKEM), Czech Republic. Looking at the waiting lists, results, and also population in detail, some patients still suffer. Methods: For the described reasons we have introduced some novel transplant methods since the second half of 2011. Kidney patients stay on dialysis; few get the best treatment...
method, which is live-donor kidney transplantation. Therefore, the live-donor program has been reorganized, kidney paired donation program introduced, miniinvasive donor nephrectomy used in all cases. Some liver patients suffer as well, especially small adults and children, also fulminant liver failure cases and those with multivisceral thrombosis. For these groups of patients we have introduced split-liver transplantation, ABO incompatible (ABOi) liver transplantation, live-donor liver transplantation, auxiliary liver transplantation, and also small bowel/multivisceral transplantation. Results: Thanks to the changes, the number of live-donor kidney transplants has increased, the number of liver transplants doubled, many fulminant liver patients survived thanks to ABOi and auxiliary transplantation, and pediatric liver cases waiting time dropped dramatically. The small bowel transplant program started successfully with two multivisceral cases. Conclusion: The novel methods and some program changes led to more transplants and also better outcomes. There is still room for further expansion and developments; there are for sure more transplant methods to be introduced. Also, the number of some transplants, e.g., live-donor kidney, still remains low. Copyright © 2016, Springer-Verlag Wien.

Coronary Microvascular Dysfunction Predicts Long-Term Outcome in Simultaneous Pancreas-Kidney Transplantation.
Tona F., Silvestre C., Rigato M., Famoso G., Marchini F., Bonfante L., Neri F., Furian L., Crepaldi C., Iliceto S., Rigotti P.

Embase
Transplantation Proceedings. 48 (2) (pp 344-348), 2016. Date of Publication: 01 Mar 2016.
Background Patients with diabetes are at increased cardiovascular risk. Simultaneous pancreas-kidney transplantation (SPKT) is the treatment of choice in patients with type 1 diabetes mellitus and diabetic nephropathy. We assessed coronary flow reserve (CFR) by transthoracic echocardiography as a marker of major adverse cardiac events (MACE) in SPKT patients.

Methods We studied 48 consecutive SPKT patients (28 male, age at SPKT 54 +/- 8 years). Time from transplantation was 8.5 +/- 3 years. Follow-up was 4.6 +/- 1.8 years. Coronary flow velocity in the left anterior descending coronary artery was detected by Doppler echocardiography at rest and during adenosine infusion. CFR was the ratio of hyperemic diastolic flow velocity (DFV) to resting DFV. A CFR <= 2 was considered abnormal and a sign of coronary microvascular dysfunction. MACE were cardiac death, myocardial infarction, and heart failure. Results CFR was 2.55 +/- 0.8. CFR was <=2 in 13 (27%) patients. CFR was lower in SPKT patients with MACE (2.1 +/- 0.7 vs 2.7 +/- 0.8, P =.03) and patients with MACE had a higher incidence of CFR <= 2 (P =.03). Time from transplantation was shorter in patients with MACE (P <.0001). Patients with CFR <= 2 had a lower MACE-free survival (P =.03). CFR <= 2 predicted the risk of MACE (P =.007) independently from coronary artery disease and metabolic control. However, this predicted role is lost when adjusted for the time from transplantation, which plays a protective role (P =.001). Conclusions In SPKT, CFR <= 2 may be a reliable marker for MACE, independent of coronary artery disease diagnosis. However, this role seems to be reduced over time. This finding suggests a gradual reduction of cardiovascular risk in SPKT patients. Copyright © 2016 Elsevier Inc.
Basiliximab induction in kidney transplantation with donation after cardiac death donors.
Yao X., Weng G., Wei J., Gao W.

Embase
Experimental and Therapeutic Medicine. 11 (6) (pp 2541-2546), 2016. Date of Publication: June 2016.
[Article]
AN: 610078808

Basiliximab is a monoclonal antibody that binds to the alpha-chain of the interleukin (IL)-2 receptor. It is used as induction therapy in kidney transplantation. The objective of the present study was to evaluate induction therapy with single-dose basiliximab (Simulect ) in kidney transplantation with donation after cardiac death (DCD) donors. A total of 33 DCD kidney transplants were performed between December 2010 and July 2013 in patients who received single-dose basiliximab (20 mg) as induction therapy. The maintenance immunosuppression included calcineurin inhibitor (cyclosporine A or tacrolimus), mycophenolate mofetil and corticosteroids. The follow-up time was 1 year. The mean ages of the DCD donors and recipients were 29.3 and 41.1 years, respectively. Within the 1-year follow-up, the overall incidence of acute rejection was 9.1%. There were 10 cases of delayed graft function among the recipients. Mean serum creatinine values at 1 week and at 1, 3, 6, 9 and 12 months post-transplantation were 257.6, 238.2, 194.5, 159.3, 137.9 and 110.8 micro mol/l, respectively, with a favorable trend to allograft function recovery over time. The 1-year patient and graft survival rates were 96.9 and 90.9%, respectively, with an infection rate of 24.2%. Increased alanine aminotransferase/aspartate transaminase levels in only 2 patients were considered to be associated with basiliximab. This experience with single-dose basiliximab for induction therapy in DCD kidney transplantation showed that favorable clinical outcomes were achieved in terms of graft survival and function within 1 year. Copyright © 2016, Spandidos Publications. All rights reserved.
Calciphylaxis: Controversies in pathogenesis, diagnosis and treatment.
Jeong H.S., Dominguez A.R.
Embase
American Journal of the Medical Sciences. 351 (2) (pp 217-227), 2016. Date of Publication: 2016.
[Article]
AN: 609054554
Calcific uremic arteriolopathy, otherwise known as calciphylaxis, is a rare disease characterized by skin ulceration and tissue necrosis, likely the result of vascular calcification with accompanying intimal hypertrophy and small vessel thrombosis. Although most often associated with end-stage renal disease, it has also been seen in a number of other disorders (collectively referred to as nonuremic calciphylaxis). The purpose of this review is to summarize and analyze the currently available literature regarding the pathophysiology, risk factors, clinical presentation, diagnostic features and treatment modalities for this exceptionally uncommon illness. A series of recommended treatments is proposed for optimal treatment of calciphylaxis lesions. Copyright © 2016 Southern Society for Clinical Investigation.
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Urothelial cancer in renal transplant recipients: Incidence, risk factors, and oncological outcome.

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Objective To evaluate the incidence and risk factors for urothelial cancer (UC) as well as the oncological outcome and allograft function in renal transplant recipients. Subjects/Patients We conducted a retrospective analysis of 1855 consecutive patients undergoing renal transplantation (TX) between February 1982 and May 2014 at a single center. UC incidence, overall and cancer-specific survival, recurrence and progression rates, risk factors for UC, and renal function were determined. Fisher's exact test and log-rank Mantel-Cox test were used as appropriate. Results In renal transplant recipients, incidence of de novo UC was 1.35% (25/1855). Deceased donor transplantation (P =.002), increased age at transplantation (P =.011), and analgesic abuse (P =.005) were significant risk factors for the development of UC post-TX. Progression rate and recurrence rate were doubled for post-TX-UC but stable for patients with pre-TX-UC compared with the general population. Analgesic abuse was associated with worse cancer specific and overall survival in post-TX patients. The overall survival status was significantly lower for post-TX patients at a median of 34 months vs 222 months in control patients. Adjuvant treatment was scarcely used. UC had no significant influence on graft function. Conclusion A higher incidence of UC was identified in renal transplant recipients compared with that for the general population. These observations justify screening for UC in renal transplant patients, especially considering that in a large proportion, a tentative diagnosis was possible with noninvasive urine analysis. Prudent adjuvant treatment for UC should be used. Limitations of this study were the retrospective design and the single-center experience. Copyright © 2016 Elsevier Inc.

Effect of hospital safety-net burden on cost and outcomes after surgery.

JAMA Surgery. 151 (2) (pp 120-128), 2016. Date of Publication: February 2016.
[Article]

AN: 608631415

IMPORTANTANCE Safety-net hospitals provide broad services for a vulnerable population of patients and are financially at risk owing to impending reimbursement penalties and policy changes.
OBJECTIVE To determine the effect of patient and hospital factors on surgical outcomes and cost at safety-net hospitals. DESIGN, SETTING, AND PARTICIPANTS Hospitals in the University HealthSystem Consortium database from January 1, 2009, through December 31, 2012 (n = 231), were grouped according to their safety-net burden, defined as the proportion of Medicaid and uninsured patient charges for all hospitalizations during that time (n = 12 638 166). Nine cohorts, based on a variety of surgical procedures, were created and examined with regard to preoperative characteristics, postoperative outcomes, and resource utilization. Multiple logistic regression was performed to analyze the effect of patient and center factors on outcomes.
Hospital Compare data from the Centers for Medicare & Medicaid Services were linked and used to characterize and compare the groups of hospitals. MAIN OUTCOMES AND MEASURES Postoperative mortality, 30-day readmissions, and total direct cost. RESULTS For all 9 procedures examined in 231 hospitals comprising 12 638 166 patient encounters, patients at hospitals with high safety-net burden (HBHs) (vs hospitals with low and medium safety-net burdens) were most likely to be young, to be black, to be of the lowest socioeconomic status, and to have the highest severity of illness and the highest cost for surgical care (P <.01 for all). For 7 of 9 procedures, HBHs had the highest proportion of emergent cases and longest length of stay (P <.01 for all). After adjusting for patient characteristics and center volume, HBHs still had higher odds of mortality for 3 procedures (odds ratios [ORs], 1.81-2.08; P <.05), readmission for 2 procedures (ORs, 1.19-1.30; P <.05), and the highest cost of care associated with 7 of 9 procedures (risk ratios, 1.23-1.35; P <.05). Analysis of Hospital Compare data found that HBHs had inferior performance on Surgical Care Improvement Project measures, higher rates of surgical complications, and inferior markers of emergency department timeliness and efficiency (all P <.05). CONCLUSIONS AND RELEVANCE These data suggest that intrinsic qualities of safety-net hospitals lead to inferior surgical outcomes and increased cost across 9 elective surgical procedures. These outcomes are likely owing to hospital resources and not necessarily patient factors. In addition, impending changes to reimbursement may have a negative effect on the surgical care at these centers. Copyright © 2016 American Medical Association. All rights reserved.

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2016
Renal transplant is the single best treatment of end-stage renal disease. Computed tomography (CT) is an excellent method for the evaluation of potential renal donors and recipients. Multiphase CT is particularly useful because of detailed evaluation of the kidneys, including the vascular anatomy and the collecting system. MR imaging has no ionizing radiation, but is limited for stone detection, making it a less preferred method of evaluating donors. Preoperative knowledge of the renal vascular anatomy is essential to minimize risks for donors. Imaging evaluation of recipients is also necessary for vascular assessment and detection of incidental findings. Copyright © 2016 Elsevier Inc.


Status EMBASE

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Publisher W.B. Saunders

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Year of Publication 2016
Comparison of minimal skin incision technique in living kidney transplantation and conventional kidney transplantation.
Kim S.-D., Kim J.-I., Moon I.-S., Park S.-C.
Embase
[Article]
AN: 609856578
Background: Recently, the most common incision for kidney transplantation (KT) is an inverted J-shaped incision known as the "hockey-stick." However, demands for minimally invasive surgery in KT are increasing as in other various fields of surgery. Hence, we evaluated whether there is difference between minimal skin incision technique in kidney transplantation (MIKT) and conventional KT (CKT). Methods: Between June 2006 and March 2013, a total of 452 living kidney transplant patients were enrolled. The MIKT group included 17 young unmarried women whose body mass index was <25 kg/m2 and had no anatomic variation. The CKT group included 435 patients. The MIKT operation technique restricted to the 10 cm-sized skin incision in the lower right abdomen from laterally below the anterior superior iliac spine to the midline just above the pubis was performed. We compared the baseline clinical characteristics and postoperative results between two groups. For proper comparison, propensity score matching was implemented. Results: There was no difference in graft function, survival, and postoperative complication rate between MIKT and CKT groups (all P > 0.05). The 5-year graft survival was 92.3% and 85.7% in MIKT and CKT groups, respectively (P = 0.786). Conclusions: Our results indicated that MIKT showed more favorable cosmetic results, and there were no statistical differences in various postoperative factors including graft function, survival, and complications compared with CKT. Hence, we suggested that MIKT is an appropriate method for selected patients in living KT. Copyright © 2016 Chinese Medical Journal.

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Institution
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Publisher
Chinese Medical Association
Date Created
Detrimental cross-talk between sepsis and acute kidney injury: New pathogenic mechanisms, early biomarkers and targeted therapies.

Dellepiane S., Marengo M., Cantaluppi V.


[Review]

AN: 609832630

This article is one of ten reviews selected from the Annual Update in Intensive Care and Emergency medicine 2016. Other selected articles can be found online at http://www.biomedcentral.com/collections/annualupdate2016. Further information about the Annual Update in Intensive Care and Emergency Medicine is available from http://www.springer.com/series/8901. Copyright © 2016 Dellepiane et al.

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(Cantaluppi) University of Eastern Piedmont, 'Maggiore della Carita' University Hospital, Department of Translational Medicine, Novara, Italy

Publisher

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Date Created

20160419

Year of Publication

2016
Aims and Objective: The aim of this study is to highlight the use of polytetrafluoroethylene (PTFE) interposition graft as an important salvage procedure in case of irreparable intimal injury of external iliac artery during renal transplant recipient surgery. Materials and Methods: Since 1987, we encountered irreparable intimal dissection of external iliac artery in five cases just after opening the clamp. It was successfully managed by PTFE interposition graft with subsequent end to side anastomosis of donor renal artery to the vascular graft. Results: No patient had bleeding or infective complications related to the graft and three patients had immediate diuresis. Normal immediate graft function was present in three patients while the other two had delayed graft function. Conclusion: Polytetrafluoroethylene interposition graft is a successful procedure to salvage the kidney and lower limb in case of progressive intimal dissection of external iliac artery during renal transplant surgery. Copyright © 2016 Urology Annals

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Early stent removal after kidney transplantation: Is it possible?.
Asgari M.A., Dadkhah F., Tara S.A., Argani H., Tavoosian A., Ghadian A.
Embase
[Article]
AN: 609639010
Background: The most important surgical complications of renal transplantation are stenosis and obstruction of the ureterovesical anastomosis. Routine use of ureteral stents can prevent this complication, but the optimal time for ureteral stent use is still controversial. Objectives: The purpose of this study is to compare the benefits and complications of early and delayed stent removal after surgery. Early ureteral stent removal can decrease some complications, such as urinary tract infections (UTIs), bladder irritation symptoms, persistent hematuria, and the risk of stent crusting; its benefits include easier stent removal and shorter hospitalization time. Patients and Methods: All patients who underwent kidney transplantation from May 2011 until March 2012 in Modarres Hospital were included in this study. We classified the patients into three groups, based on time of stent removal (10, 20, and 30 days after transplantation). Results: Ninety-one patients were studied; urologic complications (hydroureteronephrosis and urinoma) in these three groups were analyzed and showed no statistical significant difference. Conclusions: We can remove the ureteral stent earlier after kidney transplantation with no increase in the prevalence of surgical complications. Copyright © 2016, Nephrology and Urology Research Center.
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Publisher
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Date Created
Benefits and complications of removing ureteral stent based on the elapsed time after renal transplantation surgery.

Dadkhah F., Yari H., Asgari M.A., Fallahnezhad M.H., Tavoosian A., Ghadian A.

Embase


Background: The most important surgical complications of renal transplantation are stenosis and obstruction of anastomosis of the ureter to the bladder. Although the routine use of the ureteral stents to prevent such complications seems rational, the optimal time to keep the ureteral stent is still controversial. Objectives: This study presents the benefits and complications of removing the ureteral stent based on the elapsed time after the surgery. Patients and Methods: All patients who underwent kidney transplantation between May 2011 and August 2014 in Modarres hospital, Tehran, Iran, were enrolled in the study. The patients were classified into three groups. The ureteral stent was removed 10, 20, and 30 days after the transplantation in these groups. Results: A total of 529 patients underwent kidney transplant surgery in our center. Urologic complications among the three groups consisting of hydronephrosis, urinoma and collection did not have statistically significant differences. Conclusions: Ureteral stent can be picked up with no increased risk of urologic complications at shorter intervals after the kidney transplantation surgery.

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(Dadkhah, Yari, Asgari, Fallahnezhad, Tavoosian) Moddares Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of (Ghadian) Nephrology and Urology Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran, Islamic Republic of
There is a disparity between the number of kidneys available for transplantation and the number of patients awaiting an organ while on dialysis. The current kidney waiting list in the US contains more than 100,000 patients. This need has led to the inclusion of older donors with worsening renal function, as well as greater utilization of kidneys from non-heartbeating (donation after cardiac death) donors. Coinciding with this trend has been a growing interest in technology to improve the function of these more marginal organs, the most important of which currently is machine perfusion (MP) of donated kidneys after procurement. While this technology has no standard guidelines currently for comprehensive use, there are many studies that demonstrate higher organ yield and function after a period of MP. Particularly with the older donor and during donation after cardiac death cases, MP may offer some significant benefits. This manuscript reviews all of the current literature regarding MP and its role in renal transplantation. We will discuss both the experience in Europe and the US using machine perfusion for donated kidneys.

Copyright © 2016 Cannon and Franklin.

(Cannon, Franklin) Hiram C Polk Jr MD Department of Surgery, University of Louisville, Louisville, KY, United States  (Franklin) Kentucky Organ Donor Affiliates, Louisville, KY, United States
Renal disease in pregnancy.
Hall M., Brunskill N.J.

Obstetrics, Gynaecology and Reproductive Medicine. 26 (2) (pp 46-52), 2016. Date of Publication: 01 Feb 2016.

[Review]
AN: 609130904

Pregnancy in women with chronic kidney disease (CKD) is associated with risks of accelerated decline in renal function in the mother and adverse outcomes for the infant, including prematurity and growth restriction. Managing these risks requires collaboration between patient, nephrologist, neonatologist and obstetrician. In this review we will discuss approaches to managing pregnancy in women with CKD. Copyright © 2016 Elsevier Ltd.
The Effects of CKD on Cytochrome P450-Mediated Drug Metabolism.
Ladda M.A., Goralski K.B.
Embase
Advances in Chronic Kidney Disease. 23 (2) (pp 67-75), 2016. Date of Publication: 01 Mar 2016. [Review]
AN: 608923547
CKD affects a significant proportion of the world's population, and the prevalence of CKD is increasing. Standard practice currently is to adjust the dose of renally eliminated medications as kidney function declines in effort to prevent adverse drug reactions. It is increasingly becoming recognized that CKD also impacts nonrenal clearance mechanisms such as hepatic and intestinal cytochrome P450 (CYP) enzymes and drug transport proteins, the latter of which is beyond the scope of this review. CYPs are responsible for the metabolism of many clinically used drugs. Genetics, patient factors (eg, age and disease) and drug interactions are well known to affect CYP metabolism resulting in variable pharmacokinetics and responses to medications. There now exists an abundance of evidence demonstrating that CKD can impact the activity of many CYP isoforms either through direct inhibition by circulating uremic toxins and/or by reducing CYP gene expression. Evidence suggests that reductions in CYP metabolism in ESRD are reversed by kidney transplantation and temporarily restored via hemodialysis. This review summarizes the current understanding of the effects that CKD can have on CYP metabolism and also discusses the impact that CYP metabolism phenotypes can have on the development of kidney injury.
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Publisher
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20160314
Changing of the guard? A glance at the surgical representation in the Canadian renal transplantation community.
McGregor T., Bjazevic J., Patel P., Koulack J.

Embase
Canadian Urological Association Journal. 10 (1-2) (pp E7-E11), 2016. Date of Publication: January-February 2016.

Introduction: Renal transplant is the gold standard treatment for end-stage renal disease (ESRD), and the prevalence of both ESRD and renal transplant has been steadily increasing over the past decade. However, involvement of urology in renal transplant has been declining. We examine the current state of urology involvement in renal transplant programs across Canada. Methods: A telephone survey of all surgical transplant centres in Canada was performed. Information regarding the number of transplant surgeons, their individual training background, and their involvement in specific procedures, including open and laparoscopic living donor nephrectomy, deceased donor nephrectomy, and recipient renal transplant were collected. Results: There are 59 Canadian transplant surgeons, including 27 (46%) who completed a urology residency and 32 (54%) with a general surgery background. With regards to procedures performed, 58 (98%) perform recipient renal transplant surgery, 36 (61%) perform laparoscopic donor nephrectomy, and 17 (29%) perform open donor nephrectomy. There was no significant difference in the number of surgeons that perform renal recipient surgery, laparoscopic or open donor nephrectomies, and deceased donor nephrectomies between surgeons of the two different training backgrounds. Conclusions: The role of urology in Canadian renal transplant has declined significantly over the past decade. Given the medical and surgical complexity of renal transplant, along with the growing need for renal transplants, a multidisciplinary team approach is imperative. Strong urology involvement with the transplant team is crucial for optimal care of these complex patients. Copyright © 2016 Canadian Urological Association.

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OBJECTIVE. The objective of our study was to assess whether the degree and distribution of iliac artery calcifications as determined by a CT-based calcium scoring system correlates with outcomes after renal transplant. MATERIALS AND METHODS. A retrospective review of renal transplant recipients who underwent CT of the pelvis within 2 years before surgery yielded 131 patients: 75 men and 56 women with a mean age of 52 years. Three radiologists assigned a separate semiquantitative score for calcification length, circumferential involvement, and morphology for the common iliac arteries and for the external iliac arteries. The operative and clinical notes were reviewed to determine which iliac arterial segment was used for anastomosis, the complexity of the operation, and whether delayed graft function (DGF) occurred. Renal allograft survival and patient survival were calculated using the Kaplan-Meier technique.

RESULTS. Excellent interobserver agreement was noted for each calcification score category. The common iliac arteries showed significantly higher average calcification scores than the external iliac arteries for all categories. Advanced age and diabetes mellitus were independently
predictive of higher scores in each category, whereas hypertension, cigarette smoking, hyperlipidemia, and sex were not. Based on multivariate analysis, only the calcification morphology score of the arterial segment used for anastomosis was independently predictive of a higher rate of surgical complexity and of DGF. None of the scores was predictive of graft or patient survival. However, patients with CT evidence of iliac arterial calcification had a lower 1-year survival after transplant than those who did not (92% vs 98%, respectively; p = 0.05).

CONCLUSION. Only the calcification morphology score of the arterial segment used for anastomosis was significantly predictive of surgical complexity and of DGF. Routine pretransplant CT for calcification scoring in patients of advanced age or those with diabetes mellitus may enable selection of the optimal artery for anastomosis to optimize outcomes. Copyright © American Roentgen Ray Society.

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2016

402.
On-pump cardiopulmonary bypass versus off-pump coronary artery bypass grafting surgery: Renal and liver function tests.
Bayram H., Zor M.H., Erer D., Iriz E., Ozdogan M.E., Oktar L.
Embase
Gazi Medical Journal. 27 (1) (pp 1-4), 2016. Date of Publication: 2016.
[Article]
Objective: Cardiopulmonary bypass (CPB) triggers systemic inflammation. Inflammatory system activation may cause deterioration in liver and renal functions. In our study we aimed to search the effect of on-pump CPB and beating heart off-pump coronary artery bypass grafting (CABG) surgery techniques on renal and liver functions. Methods: Sixty four patients who underwent coronary artery surgery were included in the study and were divided into two groups: on-pump CPB group (40) and beating heart off-pump CABG group (24), prospectively. The blood samples were collected for preoperative and postoperative levels of blood urea nitrogen (BUN), creatinine, aspartate aminotransferase (AST), alanine aminotransferase (ALT), and AST to ALT ratio at 24th and 48th hours. Results: Clinical and demographic features were similar in both groups. There were no statistically significant difference in levels of preoperative BUN, creatinine, AST, ALT, AST to ALT ratio. The postoperative 24th hour plasma levels of creatinine, AST and AST/ALT were lower in beating heart off-pump CABG group but BUN and ALT levels were similar among the two groups. The postoperative 48th hour plasma levels of BUN, creatinine, AST and AST/ALT were lower in beating heart off-pump CABG group but levels of ALT were similar in both groups. Conclusion: Based on our findings we conclude that beating heart off-pump CABG has lower negative effect on liver and renal function than on-pump CPB. Abstract of this manuscript was presented in 7th Congress of Update in Cardiology and Cardiovascular Surgery in association with TCT Mediterranean as a poster. © Copyright 2016 by Gazi University Medical Faculty.
Coagulation status after therapeutic plasma exchange using citrate in kidney transplant recipients.

Yamada C., Pipe S.W., Zhao L., Leichtman A.B., Samaniego M., Sung R.S., Davenport R.D.

Embase
Transfusion. 56 (12) (pp 3073-3080), 2016. Date of Publication: 01 Dec 2016.

[Article]
AN: 612980884

BACKGROUND: Therapeutic plasma exchange (TPE) is increasingly used for treatment of antibody-mediated rejection (AMR) after solid organ transplants. There is concern that TPE may increase risk of bleeding, although data are limited. After TPE, clot-based coagulation tests may not accurately represent the levels of coagulation factors due to the effect of citrate. We investigated protein levels of fibrinogen using antigen detection method (FibAg) and correlated results with a clot-based fibrinogen activity test (Fib).

STUDY DESIGN AND METHODS: Nine kidney transplant recipients who received TPE for AMR were investigated. Fib, FibAg, prothrombin time/international normalized ratio (PT/INR), partial thromboplastin time (PTT), coagulation factor X chromogenic activity (CFX), and ionized calcium (iCa) were measured at pre- and post-TPE and 1, 3, 6, 9, 24, and 48 hours after the first TPE.

RESULTS: Mean Fib/FibAg ratio before TPE was 1.08; therefore, all Fib values were normalized (n) by dividing by 1.08. Overall, the mean normalized Fib (nFib)/FibAg ratio at post-TPE was 0.89 and returned to close to 1.0 at 6 hours after the first TPE. Decreases in nFib, FibAg, and CFX and increases in PT/INR and PTT post-TPE were observed. The lowest Fib, FibAg, CFX, platelet, and iCa levels were still at levels that would be considered sufficient for hemostasis at all time points.

CONCLUSION: The mean nFib/FibAg ratio after TPE was 0.89 and normalized in 6 hours, which demonstrates a persistent effect of citrate for up to 6 hours. Therefore, similar data observed in clot-based tests of PT/INR and PTT may be falsely elevated up to 6 hours after TPE due to the citrate effect.

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Publisher
Role of Coronary Angiography in the Assessment of Cardiovascular Risk in Kidney Transplant Candidates.

Embase
[Article]
AN: 613485394

Cardiovascular disease is the leading cause of death among those with renal insufficiency, those requiring dialysis, and in recipients of kidney transplants reflecting the greatly increased cardiovascular burden that these patients carry. The best method by which to assess cardiovascular risk in such patients is not well established. In the present study, 1,225 patients seeking a kidney transplant, over a 30-month period, underwent cardiovascular evaluation. Two hundred twenty-five patients, who met selected criteria, underwent coronary angiography that revealed significant coronary artery disease (CAD) in 47%. Those found to have significant disease underwent revascularization. Among the patients found to have significant CAD, 74% had undergone a nuclear stress test before angiography and 65% of these stress tests were negative for ischemia. The positive predictive value of a nuclear stress test in this patient population was 0.43 and the negative predictive value was 0.47. During a 30-month period, 28 patients who underwent coronary angiography received an allograft. None of these patients died, experienced a myocardial infarction, or lost their allograft. The annual mortality rate of those who remained on the waiting list was well below the national average. In conclusion, our results indicate that, in renal failure patients, noninvasive testing fails to detect the majority of significant CAD, that selected criteria may identify patients with a high likelihood of CAD, and that revascularization reduces mortality both for those on the waiting list and for those who receive an allograft. Copyright © 2016 Elsevier Inc.
405.
Effect of the obesity epidemic on kidney transplantation: Obesity is independent of diabetes as a risk factor for adverse renal transplant outcomes.
Kwan J.M., Hajjiri Z., Metwally A., Finn P.W., Perkins D.L.
Embase
[Article]
AN: 613225424
Background: Obesity is a growing epidemic in most developed countries including the United States resulting in an increased number of obese patients with end-stage renal disease. A previous study has shown that obese patients with end-stage renal disease have a survival benefit with transplantation compared with dialysis. However, due to serious comorbidities, many centers place restrictions on the selection of obese patients for transplantation. Further, due to obese patients having an increased risk of diabetes, it is unclear whether obesity can be an independent risk, independent of diabetes for increasing adverse renal transplant outcomes.

Methods: To investigate the role of obesity in kidney transplantation, we used the Scientific Registry of Transplant Recipients database. After filtering for subjects that had the full set of covariates including age, gender, graft type, ethnicity, diabetes, peripheral vascular disease, dialysis time and time period of transplantation for our analysis, 191,091 subjects were included in the analyses. Using multivariate logistic regression analyses adjusted for covariates we determined whether obesity is an independent risk factor for adverse outcomes such as delayed graft function, acute rejection, urine protein and graft failure. Cox regression modeling was used to determine hazard ratios of graft failure. Results: Using multivariate model analyses, we found that obese patients have significantly increased risk of adverse transplant outcomes, including delayed graft function, graft failure, urine protein and acute rejection. Cox regression modeling hazard ratios showed that obesity also increased risk of graft failure. Life-table survival curves showed that obesity may be a risk factor independent of diabetes mellitus for a shorter time to graft failure. Conclusions: A key observation in our study is that the risks for adverse outcome of obesity are progressive with increasing body mass index. Furthermore, pre-obese overweight recipients compared with normal weight recipients also had increased risks of adverse outcomes related to kidney transplantation. Copyright © 2016 Kwan et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

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20161209
The impact of blood flow rate during hemodialysis on all-cause mortality.

Embase
[Article]
AN: 613193235

Background/Aims: Inadequacy of dialysis is associated with morbidity and mortality in chronic hemodialysis (HD) patients. Blood flow rate (BFR) during HD is one of the important determinants of increasing dialysis dose. However, the optimal BFR is unclear. In this study, we investigated the impact of the BFR on all-cause mortality in chronic HD patients.

Methods: Prevalent HD patients were selected from Clinical Research Center registry for end-stage renal disease cohort in Korea. We categorized patients into two groups by BFR < 250 and >= 250 mL/min according to the median value of BFR 250 mL/min in this study. The primary outcome was all-cause mortality.

Results: A total of 1,129 prevalent HD patients were included. The number of patients in the BFR < 250 mL/min was 271 (24%) and in the BFR >= 250 mL/min was 858 (76%). The median follow-up period was 30 months. Kaplan-Meier analysis showed that the mortality rate was significantly higher in patients with BFR < 250 mL/min than those with BFR >= 250 mL/min (p = 0.042, log-rank). In the multivariate Cox regression analyses, patients with BFR < 250 mL/min had higher all-cause mortality than those with BFR >= 250 mL/min (hazard ratio, 1.66; 95% confidence interval, 1.00 to 2.73; p = 0.048).

Conclusions: Our data showed that BFR < 250 mL/min during HD was associated with higher all-cause mortality in chronic HD patients. Copyright © 2016 The Korean Association of Internal Medicine.

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407.

Views of US voters on compensating living kidney donors.
Peters T.G., Fisher J.S., Gish R.G., Howard R.J.

Embase

JAMA Surgery. 151 (8) (pp 710-716), 2016. Date of Publication: 01 Aug 2016.

[Article]

AN: 613495031

IMPORTANCE Patients in the United States waiting for kidney transplantation die in increasing numbers owing to the severe kidney shortage, which might be alleviated by compensating living kidney donors. OBJECTIVE To determine the willingness of voting US citizens to become living kidney donors and to ascertain the potential influence of compensation for donation. DESIGN, SETTING, AND PARTICIPANTS A professionally designed quantitative survey was administered by an international polling firm in June 2014. Information was collected on willingness to donate a
kidney and the potential influence of compensation ($50 000); survey data included respondent age, income, education level, sex, US region, race/ethnicity, marital status, political affiliation, likelihood to vote, and employment status. The survey was performed via a random-digit dialing process that selected respondents via both landlines and mobile telephones to improve population representation. The survey included 1011 registered US voters likely to vote. MAIN OUTCOMES AND MEASURES The degree to which the US voting public is willing to donate a kidney and the perceptions of current voters toward paying living kidney donors. RESULTS Of the 1011 respondents, 427 were male and 584 were female, with 43% of participants between ages 45 and 64 years. With respondents grouped by willingness to donate, we found that 689 (68%) would donate a kidney to anyone and 235 (23%) only to certain persons; 87 (9%) would not donate. Most (59%) indicated that payment of $50 000 would make them even more likely to donate a kidney, 32% were unmoved by compensation, and 9% were negatively influenced by payment. CONCLUSIONS AND RELEVANCE Most US voters view living kidney donation positively, and most would be motivated toward donor nephrectomy if offered a payment of $50 000. Because most registered voters favor such payments, and because thousands of lives might be saved should compensation increase the number of transplantable kidneys, laws and regulations prohibiting donor compensation should be modified to allow pilot studies of financial incentives for living kidney donors. Outcomes of such trials could then result in evidence-based policies, which would incorporate fair and just compensation to those persons willing to undergo donor nephrectomy. Copyright 2016 American Medical Association. All rights reserved.
408.
Indirect estimation of nephron number: A new tool to predict outcomes in renal transplantation?.
Puelles V.G., Kanzaki G., Bertram J.F.
Embase
Nephrology Dialysis Transplantation. 31 (9) (pp 1378-1380), 2016. Date of Publication: 01 Sep 2016.
[Article]
AN: 613230680
Schachtner and Reinke provide an important first step towards the development of clinical algorithms for the indirect estimation of nephron number. Is this tool ready to be used in day-to-day practice? The answer is probably not. However, we should applaud the efforts of clinicians who try to use available clinical data to generate otherwise unobtainable information such as nephron number. Copyright © 2015 The Author. Published by Oxford University Press on behalf of ERA-EDTA. All rights reserved.
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Publisher
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2016
Estimated nephron number of the remaining donor kidney: Impact on living kidney donor outcomes.

Schachtner T., Reinke P.

Embase

Nephrology Dialysis Transplantation. 31 (9) (pp 1523-1530), 2016. Date of Publication: 01 Sep 2016.

[Article]

AN: 613230659

Background. It has been demonstrated that low birth weight gives rise to a reduction in nephron number with increased risks for hypertension and renal disease. Its impact on renal function in kidney donors, however, has not been addressed. Methods. To investigate the impact of birth weight, kidney weight, kidney volume and estimated nephron number on kidney function, we collected data from 91 living kidney donors before nephrectomy, at +12, +36 and +60 months after nephrectomy. Results. Birth weight showed a positive correlation with estimated glomerular filtration rate (eGFR) at +12, +36 and +60 months after nephrectomy (P < 0.05). The strongest link was observed in donors >50 years old (R = 0.535, P < 0.001 at +12 months). Estimated nephron number and eGFR showed a strong positive correlation at +12, +36 and +60 months after nephrectomy (R = 0.540; R = 0.459; R = 0.506, P < 0.05). Daily proteinuria at +12 months showed a negative correlation with birth weight (P = 0.009). Donors with new-onset hypertension showed significantly lower birth weights and higher uric acid levels (P < 0.05). Kidney weight and volume did not show any impact on donor outcomes (P > 0.05). Conclusions. Low nephron number predisposes donors to inferior remaining eGFR, hypertension and proteinuria. The strong correlation in elderly donors may be attributed to reduced renal functional reserve due to the decline of renal function with age. Copyright © 2016 The Author. Published by Oxford University Press on behalf of ERA-EDTA. All rights reserved.

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Publisher

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Date Created

20161207

Year of Publication

Coagulation is an important pathway in the pathophysiology of ischemia-reperfusion injuries. In particular, deceased after circulatory death (DCD) donors undergo a no-flow period, a strong activator of coagulation. Hence, therapies influencing the coagulation cascade must be developed. We evaluated the effect of a new highly specific and effective anti-Xa/IIa molecule, with an integrated innovative antidote site (EP217609), in a porcine preclinical model mimicking injuries observed in DCD donor kidney transplantation. Kidneys were clamped for 60 minutes (warm ischemia), then flushed and preserved for 24 hours at 4degreeC in University of Wisconsin (UW) solution (supplemented or not). EP217609-supplemented UW solution (UW-EP), compared with unfractionated heparin-supplemented UW solution (UW-UFH) or UW alone (UW). A mechanistic investigation was conducted in vitro: addition of EP217609 to endothelial cells during hypoxia at 4degreeC in the UW solution inhibited thrombin generation during reoxygenation at 37degreeC in human plasma and reduced tumor necrosis factor alpha, intercellular adhesion molecule 1, and vascular cell adhesion molecule 1 messenger RNA cell expressions. In vivo, function recovery was markedly improved in the UW-EP group. Interestingly, levels of thrombin-antithrombin complexes (reflecting thrombin generation) were reduced 60 minutes after reperfusion in the UW-EP group. In addition, 3 months after transplantation, lower fibrosis, epithelial-mesenchymal transition, inflammation, and leukocyte infiltration were observed. Using this new dual anticoagulant, anti-Xa/IIa activity during kidney flush and preservation is protected by reducing thrombin generation at revascularization, improving early function recovery, and decreasing chronic lesions. Such an easy-to-deploy clinical strategy could improve marginal graft outcome. Copyright © 2016 Elsevier Inc.
2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS.
Embase
European Heart Journal. 37 (38) (no pagination), 2016. Date of Publication: 2016.
[Review]
2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS.
National Impact of Maintenance Dialysis or Renal Transplantation on Outcomes Following ST Elevation Myocardial Infarction.
Sakhuja A., Wright R.S., Schold J.D., McCarthy J.T., Williams A.W., Amer H., Albright R.C.
Embase
[Article]
AN: 612619409
Background: Though cardiovascular disease is an important cause of mortality in patients with end-stage renal disease, epidemiology of ST-elevation myocardial infarction (STEMI) is less well described in this population. Methods: This study included STEMI hospitalizations in patients aged >=20 using Nationwide Inpatient Sample Database from 2006 to 2010. Primary outcomes were incidence and trends of STEMI hospitalizations based on renal function status. We also looked at utilization of revascularization procedures, all-cause-hospital mortality and predictors of mortality. Results: Of the estimated 882,447 STEMI hospitalizations, 11,383 were on maintenance dialysis and 1,076 had renal transplants. The incidence of STEMI was over 7 times in patients on maintenance dialysis and 1.73 times in renal transplant recipients compared to the general population. This incidence has however declined in those on maintenance dialysis (p for trend <0.001) to a greater extent than the general population and patients with renal transplant. Utilization of revascularization procedures was lowest in patients on maintenance dialysis (51.6 vs. 73.3% in renal transplant recipients and 77.0% in general population; p < 0.001) and mortality was highest (21.6 vs. 10.9 vs. 6.8%; p < 0.001). Being on maintenance dialysis or having a renal transplant were both independent predictors of mortality in patients hospitalized with STEMI. There was a differential effect of cardiac catheterization on odds of mortality with lesser impact in patients on maintenance dialysis. Conclusions: STEMI hospitalizations are more common in patients on maintenance dialysis and with renal transplants. The utilization of revascularization procedures remains low and mortality high in these patients. Copyright © 2016 S. Karger AG, Basel.

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The purpose of this review is to examine the evidence supporting the application of plasma exchange in renal disease. Our review focuses on the following 6 most common renal indications for plasma exchange based on 2014 registry data from the Canadian Apheresis Group: (i) thrombotic thrombocytopenic purpura (TTP)/hemolytic uremic syndrome; (ii) renal transplantation, (iii) anti-neutrophil cytoplasm antibodies-associated vasculitis, (iv) cryoglobulinemia, (v) focal segmental glomerulosclerosis, and (vi) Goodpasture syndrome. The rarity of these diseases and their rapid, often fatal course mean that randomized controlled studies of plasma exchange are rarely conducted. Although evidence from an adequately powered randomized controlled trial supports the use of plasma exchange to treat thrombotic thrombocytopenic purpura, the use of plasma exchange to treat other renal diseases is only supported by observational and mechanistic studies. Larger well-designed trials are needed to clarify the potential role of plasma exchange in renal disease. Growing international collaboration will improve the quality of future studies in this area. Copyright © 2016 International Society of Nephrology
Endodontic management of patients with systemic complications.
Rajeswari K., Kandaswamy D., Karthick S.

[Review]

AN: 613090099

Successful endodontic practice requires complete knowledge about the various medical conditions and appropriateness in planning treatment as per the need with effective safety measures. This review focuses on a number of systemic complications encountered in endodontic practice and directions to be followed for avoiding potential complications. A detailed PubMed search was carried out using specific keywords, and 25 articles were referred for finalizing the content. Copyright © 2016 Journal of Pharmacy and Bioallied Sciences Published by Wolters Kluwer-Medknow.
Limited health literacy in advanced kidney disease.
Embase
Kidney International. 90 (3) (pp 685-695), 2016. Date of Publication: 01 Sep 2016.
[Article]
AN: 613126599
Limited health literacy may reduce the ability of patients with advanced kidney disease to understand their disease and treatment and take part in shared decision making. In dialysis and transplant patients, limited health literacy has been associated with low socioeconomic status, comorbidity, and mortality. Here, we investigated the prevalence and associations of limited health literacy using data from the United Kingdom-wide Access to Transplantation and Transplant Outcome Measures (ATTOM) program. Incident dialysis, incident transplant, and transplant wait-listed patients ages 18 to 75 were recruited from 2011 to 2013 and data were collected from patient questionnaires and case notes. A score >2 in the Single-Item Literacy Screener was used to define limited health literacy. Univariate and multivariate analyses were performed to identify patient factors associated with limited health literacy. We studied 6842 patients, 2621 were incident dialysis, 1959 were wait-listed, and 2262 were incident transplant. Limited health literacy prevalence was 20%, 15%, and 12% in each group, respectively. Limited health literacy was independently associated with low socioeconomic status, poor English fluency, and comorbidity. However, transplant wait-listing, preemptive transplantation, and live-donor transplantation were associated with increasing health literacy.  Copyright © 2016
417.
Non-HLA-matched 3rd party vascular allograft in renal transplant may lead to sensitization against donor HLA.

Watson H., Pande R., Farid S., Ecuyer C., Baker R., Clarke B., Ahmad N.

Embase
Clinical Transplantation. 30 (11) (pp 1508-1512), 2016. Date of Publication: 01 Nov 2016.

[Article]
AN: 612722963
3rd party donor vessels are often used for vascular reconstruction in organ transplantation. While current practice ensures that 3rd party vessels are blood group matched, HLA matching to the non-intended recipient is not performed. This practice potentially sensitizes the recipient and may reduce their future chance of renal transplant from a larger pool of donors. We examined our cohort of renal transplant recipients who received non-HLA-matched 3rd party vessels for the de novo development of donor-specific HLA antibodies. Our institution's Human Tissue Authority (HTA) blood vessel registers were examined to identify stored donor vessels and their non-intended recipients. Donor vessel HLA status was cross-referenced with the recipient HLA status. Between 2004 and 2014, five patients were identified that received 3rd party non-HLA-matched vessels for vascular reconstruction during renal transplantation. Three patients (60%) subsequently developed donor-specific HLA antibodies. These data provide evidence that use of non-HLA-matched stored 3rd party vascular grafts may lead to sensitization in the recipient. Where time permits, HLA matching should be performed to avoid this allogeneic response. Laboratories monitoring DSA should be aware of any patient receiving a non-HLA-matched 3rd party vascular graft, and recipients may benefit from increased post-transplant immunological vigilance.  

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2016
Improving Accuracy of Urinary miRNA Quantification in Heparinized Patients Using Heparinase I Digestion.
Roest H.P., Verhoeven C.J., de Haan J.E., de Jonge J., IJzermans J.N.M., van der Laan L.J.W.
Embase
Journal of Molecular Diagnostics. 18 (6) (pp 825-833), 2016. Date of Publication: 01 Nov 2016.
[Article]
AN: 612966897
miRNAs have emerged as promising biomarkers because of their association with cell stress and diseases and their easy detection and stability in many body fluids. Because of the sensitivity, the method of choice to detect miRNAs is quantitative RT-PCR (RT-qPCR). Therapeutics, in particular circulating anticoagulants, are notorious for their inhibitory effect on RT-qPCR-based measurements. The effect of heparin contamination on inhibition of RT-qPCR from miRNAs isolated from urine has, however, never been investigated. We obtained urine samples from healthy controls and from heparinized patients undergoing major surgery (live kidney donation or liver transplantation) (n = 27). Samples were spiked with synthetic miRNAs to monitor RNA loss during workup, and levels of endogenous and spiked-in miRNAs were quantified by RT-qPCR. Endogenous miRNAs in urine were protected from degradation, but levels differed substantially within surgery groups. Variability in detection levels of spiked-in miRNAs was low in nonhospitalized controls, but was high in both surgery groups, and the difference in miRNA levels correlated well with the heparin concentration in urinary samples. Treatment of urinary RNA with heparinase I during RT-qPCR strongly reduced this variation in a dose-dependent manner. Heparinase I should therefore be considered as standard step for detection of miRNA in urine from hospitalized individuals. Copyright © 2016 American Society for Investigative Pathology and the Association for Molecular Pathology
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From June 11-15, 2016 the American Transplant Congress, the joint meeting of the American Society of Transplantation and the American Society of Transplant Surgeons, held its annual meeting in Boston, MA. The meeting, attended by 5200 registrants, included pre-meeting conferences, focused topic sessions, and hundreds of high-quality presentations from the transplant field. This meeting report highlights key findings from specific basic science, translational, and clinical research presentations deemed to have notable impact in thematic areas. In particular, there were a number of transformative studies indicating important advances in the understanding of alloimmunity, chronic rejection, tolerance, and organ-specific outcomes. Many of these results are discussed in the context of the published literature to showcase rapid advances in the transplant field. © Copyright 2016 The American Society of Transplantation and the American Society of Transplant Surgeons

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2016
Patient Selection and Surgical Management of High-Risk Patients with Morbid Obesity.
Daniel Guerron A., Portenier D.D.
Embase
[Review]
AN: 612634780
Bariatric surgery is the most effective way to improve comorbidities related to obesity. Since the introduction of minimally invasive laparoscopic surgery in the bariatric surgery techniques, the number of procedures has increased substantially; advances in techniques and the transition from open to minimally invasive procedures have decreased morbidity and mortality. Multidisciplinary teams in charge of the operative planning, surgical act, and postoperative recovery are determinant in the success of the management of high-risk bariatric patients; careful identification and preoperative management of these higher-risk patients is crucial in decreasing complications after weight loss surgery. Copyright © 2016 Elsevier Inc.

Laparoscopic Living Donor Nephrectomy: Low Surgical Risk for High-quality Grafts.
Renal transplantation is most important for patients with end-stage renal disease to preserve their survival and quality of life. Living donation has decisive advantages over deceased donor kidney transplantation, and with the continuing organ shortage, it also can reduce the number of patients waiting for an organ. The major problem with living kidney donation is that a healthy person has to undergo a substantial surgical procedure to provide the organ for transplantation; therefore, a nephrectomy technique that is associated with the lowest surgical risk for the donor and the best organ quality for the recipient should be used. Since its introduction by Ratner and colleagues in 1995, laparoscopic donor nephrectomy has become the technique of choice at many major transplant centres. The aim is to achieve less postoperative pain, shorter hospitalisation time, more rapid return to normal activities, a more cosmetically acceptable incision, and, in particular, a greater patient acceptance. All techniques for living donor nephrectomy (open donor nephrectomy, "pure" laparoscopic donor nephrectomy, hand-assisted laparoscopic donor nephrectomy, robot-assisted laparoscopic donor nephrectomy, laparoscopic donor nephrectomy via natural orifice transluminal endoscopic surgery or laparoendoscopic single-site surgery, and retroperitoneoscopic donor nephrectomy) achieve good results, in so far as they are performed at specialised centres. Perioperative complications are rare, and the quality of the grafts is excellent. Renal graft function is specified at up to 96% at 1 yr and 85% at 5 yr after living donor kidney transplantation. Patient summary Living donation has decisive advantages over deceased donor kidney transplantation. When performed at specialised centres, living donor nephrectomy achieves good results, with few perioperative complications and excellent graft quality.

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20161028
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Renal transplantation is now considered the treatment of choice for end-stage renal disease despite its medical and surgical complications. The main surgical complications of renal transplantation are urologic and related to the quality of the transplant ureter and the quality of the ureterovesical anastomosis. These complications are a major concern in most cases because they occur in a high-risk clinical setting in patients with a solitary functioning kidney. They generate considerable morbidity and excess cost but have little impact on long-term graft survival when they are managed rapidly. The incidence of these complications has decreased over time with a better knowledge of their mechanisms of onset and progress in surgical techniques. The complication rate currently appears to be stabilizing despite the increasingly frequent use of transplants derived from frailer and older extended criteria donors. Some complications may occur during the first postoperative month, corresponding to urinary fistulas and ureteric obstructions by extrinsic compression. Other complications may occur later, such as ureteric stenosis or vesicoureteric reflux. Patients with these complications must be managed in a specialized unit to ensure optimal preservation of graft function and graft survival. Patient summary This article describes the urologic complications of renal transplantation. Early onset ureteric fistulas require rapid surgical management to avoid other later complication. The treatment of ureteric stenoses has benefited from progress in endourology, but many cases still require conventional surgical management. Copyright © 2016 European Association of Urology
ADPKD: clinical issues before and after renal transplantation.
Messa P., Alfieri C.M., Montanari E., Ferrareso M., Cerutti R.

Embase
Journal of Nephrology. 29 (6) (pp 755-763), 2016. Date of Publication: 01 Dec 2016.
[Review]
AN: 612913743
Autosomal dominant polycystic kidney disease (ADPKD) is the first genetic cause of end-stage renal disease (ESRD) and the number of these patients who are listed for or receive a kidney transplant (KTx) is continuously increasing over time. Hence, nephrologists are involved not only in the handling of ADPKD patients during the long course of the disease, but also in programming and performing a renal transplant. The handling of all these processes implies the complete awareness of a number of critical points related to the decisions to be taken both before and after the transplant intervention. In the present review, we will briefly deal with the main critical points related to the clinical handling of the patients both before and after KTx. Copyright © 2016, Italian Society of Nephrology.

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Aspirin Use and Incident Cardiovascular Disease, Kidney Failure, and Death in Stable Kidney Transplant Recipients: A Post Hoc Analysis of the Folic Acid for Vascular Outcome Reduction in Transplantation (FAVORIT) Trial.


Embase

[Article]
AN: 609111749

Background Cardiovascular disease (CVD) is the leading cause of death in kidney transplant recipients. Whether aspirin may reduce the risk for CVD, death, and kidney failure outcomes is uncertain. Study Design Post hoc cohort analysis of FAVORIT, a randomized trial examining the effect of homocysteine-lowering vitamins on CVD in kidney transplant recipients. Setting & Participants Prevalent adult kidney transplant recipients with hyperhomocysteinemia and stable kidney function from the United States, Canada, and Brazil participating in FAVORIT, with no known history of CVD. Predictor Aspirin use, with aspirin users matched to nonusers using a propensity score. Outcomes Incident CVD events, kidney failure, all-cause mortality, a composite of CVD events or mortality, and a composite of kidney failure or mortality. Cox proportional hazards models with a robust variance to account for the correlation in outcomes within matched pairs were sequentially adjusted for demographic, clinical, and laboratory characteristics to assess the association between aspirin use and events. Results 981 aspirin users were matched to 981 nonusers. During a 4-year mean follow up, there were 225 CVD events, 200 deaths, 126 kidney failure events, 301 composite kidney failure or mortality events, and 324 composite CVD or mortality events. Adjusted models showed no significant difference associated with aspirin use in risk for CVD events, all-cause mortality, kidney failure, composite of kidney failure or mortality,
or composite of primary CVD events or mortality (HRs of 1.20 [95% CI, 0.92-1.58], 0.92 [95% CI, 0.69-1.23], 1.19 [95% CI, 0.81-1.74], 1.03 [0.82-1.31], and 1.11 [95% CI, 0.88-1.38], respectively). Limitations We did not examine dose or continued use of aspirin after randomization. CVD history is dependent on participant report at baseline. Aspirin use was non-randomly assigned. Conclusions Aspirin use is not associated with reduced risk for incident CVD, all-cause mortality, or kidney failure in stable kidney transplant recipients with no history of CVD.

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425.
Bzoma B., Kostro J., Debska-Slisien A., Hellmann A.R., Zadrozny D., Sledzinski Z., Rutkowski B.
Embase
Transplantation Proceedings. 48 (5) (pp 1637-1640), 2016. Date of Publication: 01 Jun 2016.
Lymphocele is one of the most common complications after kidney transplantation. It is usually asymptomatic, but can cause pressure on the kidney transplant, ureter, bladder, and adjacent vessels with deterioration of graft function, ipsilateral leg edema, and external iliac vein thrombosis. Peritoneal fenestration is a well-established method for treatment. In this report, we present the incidence of symptomatic lymphocele requiring treatment (LRT), demographic and surgical factors that influenced lymphocele formation, its clinical presentation, and 2 types of treatment: open and laparoscopic intraperitoneal drainage in the experience of our center.

Material and Methods

We retrospectively analyzed all kidney transplantations performed between January 2007 and December 2014 in Gdansk Transplantation Center (n = 740) and selected patients with LRT. LRT occurred in 59 cases (8%). All other patients transplanted during the same time (n = 681) were treated as a control group in the univariate and multivariate analysis of risk factors of the lymphocele formation. Results Surgical intraperitoneal drainage was performed in an open method in 53 cases and laparoscopically in 6 patients. We observed recurrence of lymphocele in 11 cases (18.6%). Acute rejection episodes (ARE) and delayed graft function (DGF) were more frequent in patients with LRT. ARE and age were independent risk factors for LRT in multivariate analysis. The mean estimated glomerular filtration rate by the Modification of Diet in Renal Disease method at 1 month after the fenestration was higher than before the operation (51.7 and 43.6 mL/min, respectively). Conclusions Fenestration is a safe and effective method of treatment of symptomatic lymphocele. ARE, DGF, and older age were associated with a greater risk of LRT. Copyright © 2016 Elsevier Inc.
Renal Function and Urinary Biomarkers in Cardiac Bypass Surgery: A Prospective Randomized Trial Comparing Three Surgical Techniques.

Deininger S., Hoenicka M., Muller-Eising K., Rupp P., Liebold A., Koenig W., Gorki H.

Embase
Thoracic and Cardiovascular Surgeon. 64 (7) (pp 561-568), 2016. Date of Publication: 01 Oct 2016.

[Article]
AN: 607221464

Background Cardiopulmonary bypass procedure is associated with an increased risk of renal impairment. To which extent structural damage causes functional decline is unknown. We evaluated perioperative kidney injury and function in patients treated with conventional extracorporeal circulation (CECC), minimized extracorporeal circulation (MECC), and off-pump coronary artery bypass grafting (OPCAB). Methods Blood and urine samples, collected at baseline and up to 72 hours after surgery from patients of the HEPCON trial (DRKS00007580, 120 patients randomized for heparin management and for surgical technique), were analyzed for differences in renal injury and function. Neutrophil gelatinase-associated lipocalin, alpha glutathione S-transferase, liver fatty acid-binding protein, and kidney injury molecule-1 were measured as urinary protein markers of renal tubular injury. Serum creatinine, blood urea levels, and estimated glomerular filtration rate were determined to monitor renal function. Results Markers of tubular injury differed significantly between surgical technique groups early after surgery, indicating the most detrimental effect in CECC. Hemolysis and hemodilution correlated with these early changes. A late rise did not show intergroup differences. Time courses of renal function parameters, as well as the development of acute kidney injury in 15 patients (13.5%), were irrespective of surgical technique. Heparin management did not influence renal parameters. Conclusion During coronary artery bypass grafting, CECC temporarily induces more tubular injury than MECC or OPCAB. However, late changes of renal function parameters occur irrespective of extracorporeal perfusion mode and even in off-pump surgery. Copyright © Georg Thieme Verlag KGStuttgart . New York.
Atrial fibrillation in chronic kidney disease.
Voroneanu L., Ortiz A., Nistor I., Covic A.
Embase
European Journal of Internal Medicine. 33 (pp 3-13), 2016. Date of Publication: 01 Sep 2016.
[Review]
AN: 610234515
Atrial fibrillation (AF), one of the most common dysrhythmia in clinical practice, remains frequently in people with chronic kidney disease (CKD). AF is associated with a fivefold risk of stroke, a threefold incidence of heart failure, and an increased risk of death. Co-existence of AF and CKD raises substantially morbidity and mortality. Moreover, the optimal treatment approach (rate versus rhythm control) remains debated due to lack of hard evidence. Oral anticoagulation is challenging, since these patients have both a prothrombotic state and an increased risk of stroke and an inherent platelet and vascular dysfunction and an amplified rate of bleeding. Although promising, the newer anticoagulation agents were not tested in severe CKD. Furthermore, fatal bleeding has been reported. Copyright © 2016 European Federation of Internal Medicine.
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Publisher
Prediction, prevention, and management of delayed graft function: where are we now?.
Nashan B., Abbud-Filho M., Citterio F.
Embase
Clinical Transplantation. 30 (10) (pp 1198-1208), 2016. Date of Publication: 01 Oct 2016.
[Review]
AN: 612721388
Delayed graft function (DGF) remains a major barrier to improved outcomes after kidney transplantation. High-risk transplant recipients can be identified, but no definitive prediction model exists. Novel biomarkers to predict DGF in the first hours post-transplant, such as neutrophil gelatinase-associated lipocalin (NGAL), are under investigation. Donor management to minimize the profound physiological consequences of brain death is highly complex. A hormonal resuscitation package to manage the catecholamine "storm" that follows brain death is recommended. Donor pretreatment with dopamine prior to procurement lowers the rate of DGF. Hypothermic machine perfusion may offer a significant reduction in the rate of DGF vs simple cold storage, but costs need to be evaluated. Surgically, reducing warm ischemia time may be advantageous. Research into recipient preconditioning options has so far not generated clinically helpful interventions. Diagnostic criteria for DGF vary, but requirement for dialysis and/or persistent high serum creatinine is likely to remain key to diagnosis until current work on early biomarkers has progressed further. Management centers on close monitoring of graft (non)function and physiological parameters. With so many unanswered questions, substantial reductions in the toll of DGF in the near future seem unlikely but concentrated research on many levels offers long-term promise. Copyright © 2016 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd
PMID
429.
Perioperative outcomes of coronary artery bypass graft in renal transplant recipients in the United States: results from the Nationwide Inpatient Sample.
Tooley J.E., Bohl D.D., Kulkarni S., Rodriguez-Davalos M.I., Mangi A., Mulligan D.C., Yoo P.S.
Embase
Clinical Transplantation. 30 (10) (pp 1258-1263), 2016. Date of Publication: 01 Oct 2016.
[Article]
AN: 612721176

Background: Cardiovascular disease is the leading cause of morbidity and mortality in patients with chronic kidney disease (CKD). In fact, death from cardiovascular disease is the number one cause of graft loss in kidney transplant (KTx) patients. Compared to patients on dialysis, CKD patients with KTx have increased quality and length of life. It is not known, however, whether outcomes of coronary artery bypass graft (CABG) surgery differ between CKD patients with KTx or on dialysis. Methods: This was a retrospective cohort study comparing CKD patients with KTx or on dialysis undergoing CABG surgery included in the Nationwide Inpatient Sample from 2002 to 2011. Logistic and linear regression models were used to estimate the adjusted associations of KTx on all-cause in-hospital mortality, length of stay, cost of hospitalization, and rate of complications in CABG surgery. Results: CKD patients with KTx had decreased all-cause in-hospital mortality (2.68% vs 5.86%, odds ratio (OR)=0.56, 95% confidence interval (CI)=0.32 to
0.99, P=.046), length of stay (beta=-2.96, 95% CI=-3.67 to -2.46, P<.001), and total hospital charges (difference=-$38 884, 95% CI=-$48 173 to -$29 596, P<.001). They also had decreased rate of a number of perioperative complications. Conclusions: CKD patient with KTx have better perioperative outcomes in CABG surgery compared to patients on dialysis.

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2016

430.
"Blame it on the Comorbidities": A 5-Year Follow-Up of 53 Chronic Dialysis-Dependent Patients Who Underwent Cardiac Surgery.

Deutsch O., Rippinger N., Spiliopoulos K., Eichinger W., Gansera B.

Embase
Thoracic and Cardiovascular Surgeon. 64 (7) (pp 548-554), 2016. Date of Publication: 01 Oct 2016.

[Article]
AN: 603273665

Objectives This study evaluates midterm survival rates and risk factors for mortality of chronic dialysis-dependent patients undergoing cardiac surgery. Methods Fifty-three dialysis-dependent patients (34 males, aged 67 +/- 12 years) with end-stage renal disease operated within March 2007 and May 2012 were analyzed retrospectively. Survival rates were calculated using Kaplan-Meier methods. Predictors of midterm survival were identified with multivariate Cox-regression
analysis. Results Twenty-three patients received isolated coronary artery bypass graft surgery, 17 received isolated valve replacement, and 13 received combined procedures. Thirty-day mortality was 24.5% (n = 13). Follow-up was complete for 94.3% (n = 50). Survival rates at 1, 3, and 5 years were: 82, 50, and 17%, respectively. Neither age, gender, poor ejection fraction, emergency, ECC/X-clamp (cross-clamp) time, nor use of left internal thoracic artery or right internal thoracic artery had any influence on midterm survival. Causes of death within midterm follow-up period were related to cardiac events in 16% and neurological events in 16%. In the majority (47%), cause of death was associated with peripheral arterial disease (PAD). The only comorbidity, which could be identified as a significant risk factor, was PAD (p = 0.035). Five patients underwent successful renal transplantation within the follow-up period. Conclusion Although 30-day mortality in this high-risk patient population was increased, midterm survival rates were comparable to the results described in the literature. Cause of death within midterm follow-up period was mostly noncardiac related. Given the limited number of patients, predictors for enhanced 30-day mortality, such as preoperative myocardial infarction, prolonged extracorporeal circulation, operation time, and diabetes mellitus, did not have an influence on midterm survival. Copyright © Georg Thieme Verlag KG Stuttgart. New York.

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431.
Dobutamine stress echocardiography can risk stratify and prognosticate patients undergoing renal transplantation.
Cheema S.U.R., Cheema S.
Cardiovascular death rate in dialysis and renal transplant (RT) patients is twice, while myocardial infarction (MI) is 3-5 times that of general population. Prognostic value of Dobutamine Stress Echocardiography (DSE) in these patients is limited. The ability of pre-transplant DSE to predict cardiac events (cardiac death, MI, unstable angina, PTCA or CABG) was prospectively evaluated in a group of 46 patients. Group I: 34 patients with normal DSE. Group II: 12 patients with abnormal DSE. Inducible ischemia in 6 patients & baseline wall motion abnormality (LVEF<40%) in 6 patients. On follow up (4.3 years, r=2-5.5), there was one MI in group I and no cardiac death (total cardiac events 1/34, 3%). In group II: there was one cardiac death and three patients had an acute MI (total cardiac events: 4/12, 33%, P value=0.013). We concluded that a normal Dobutamine Stress Echocardiography is associated with a benign prognosis in Renal Transplant patients and Dobutamine Stress Echo can risk stratify and prognosticate patients undergoing Renal Transplantation.
After publication of the initial version of the Japanese guidelines for urological surgery in 2007, new surgical techniques have been introduced. Furthermore, several important issues, such as criteria for use of single-dose antimicrobial prophylaxis and control of hospitalized infection, were also established, which led to alterations of the methods used for antimicrobial prophylaxis as well as perioperative management. The purpose of antimicrobial prophylaxis is to protect the surgical wound from contamination by normal bacterial flora. Antimicrobial prophylaxis should be based on penicillins with beta-lactamase inhibitors, or first- or second-generation cephalosporins, though penicillins without beta-lactamase inhibitors should not be prescribed because of the high prevalence of antimicrobial resistance. As an adequate intratissue concentration of the antimicrobial at the surgical site should be accomplished by the time of initiation of surgery, antimicrobial prophylaxis should be started up to 30 min before beginning the operation. Antimicrobial prophylaxis should be terminated within 24 h in clean and clean-contaminated surgery, and within 2 days of surgery using the bowels, because a longer duration is a risk factor for surgical site infection development. Importantly, possible risk factors for surgical site infections include the antimicrobial prophylaxis methodology used as well as others, such as duration of preoperative hospitalization, hand washing, the American Society of Anesthesiologists score, diabetes and smoking history. These guidelines are to be applied only for preoperatively non-infected low-risk patients. In cases with preoperative infection or bacteriuria that can cause a surgical site infection or urinary tract infection after surgery, patients must receive adequate preoperative treatment based on the individual situation. Copyright © 2016 The Japanese Urological Association

PMID

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433.
Kumar S., Jeon J.H., Hakim A., Shrivastava S., Banerjee D., Patel U.
Embase
Radiology. 281 (1) (pp 301-310), 2016. Date of Publication: October 2016.
[Article]
AN: 612480205
Purpose: To study long-term graft and patient survival after percutaneous ureteroplasty of ureteric stenosis after renal transplantation and to compare the outcomes to those of patients who did not develop ureteric stenosis. Materials and Methods: An ethical waiver was obtained for this 23-year retrospective matched cohort study of 52 of 1476 consecutive kidney transplant recipients who developed postoperative ureteric stenosis. Data were collected between January 1990 and December 2012. All patients (mean age, 47 years [range, 23-72 years]; 36 men aged 29-72 years [mean age, 49 years] and 24 women aged 23-68 years [mean age, 42 years]) underwent
percutaneous ureteroplasty; recurrent stenosis was managed surgically or by means of long-term ureteric stent placement. Outcomes were compared with those of a matched control group of transplant recipients with no history of ureteric stenosis. Primary outcome measures were death-censored graft failure and all-cause mortality. Secondary outcome measures were the effect of time of stricture onset on graft survival, complications, and risk factors for recurrent stenosis. Kaplan-Meier curves were compared by using log-rank tests, with P<.05 indicative of a statistically significant difference. Results: Balloon dilation was technically successful in all 52 strictures, but stenosis recurred in 10 patients and was treated with surgery (n = 5) or long-term stent placement (n = 5). The 10-year graft and patient survival were not significantly different in study versus control groups, with graft survival of 64.5% (95% confidence interval [CI]: 43.4%, 79.4%) versus 76.3% (95% CI: 58.6%, 87.2%), respectively (P = .372), and patient survival of 82.2% (95% CI: 62.9%, 92%) versus 89.9% (95% CI: 74.6%, 96.2%) (P = .632). Subgroup analysis showed that stenosis occurring less than 3 months (10-year graft survival, 59.1%), at least 3 months (10-year graft survival, 67.3%), and at least 6 months (10-year graft survival, 53.0%) after transplantation did not adversely affect graft survival compared with that of the control group (P > .05). Cold ischemia time was longer in those with recurrent stenosis than in control subjects (16.1 vs 8.4 hours, respectively; P = .034). The minor and major complication rates were 13% and 5.7%, respectively, with no 30-day graft loss and patient mortality.

Conclusion: Long-term graft and patient survival in patients with percutaneous ureteroplasty of transplant ureteric stenosis were not significantly worse than those in a control group.  

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Identifying and managing lupus nephritis during pregnancy.

Fredi M., Gregorini G., Zatti S., Lojacono A., Tincani A.

Embase

Expert Opinion on Orphan Drugs. 4 (10) (pp 1021-1031), 2016. Date of Publication: 02 Oct 2016.

[Review]

AN: 612440339

Introduction: Systemic lupus erythematosus (SLE) is a multi-organ disease that commonly affects women of child bearing-age, and lupus nephritis (LN) represents one of the most severe manifestations. Advances in treatment and better knowledge of the disease have resulted in an increasing number of women seeking pregnancy. Awareness of the relationship of the condition with respect to pregnancy and long-term prognosis is important for all clinicians involved. Presentation of LN can range from mild asymptomatic proteinuria to rapidly progressive renal failure and may occur before, during, or after pregnancy. Areas covered: Here we detail the evolution of maternal disease, obstetrical and neonatal outcomes. We also report a practical approach to managing these pregnancies before, during and after analysing the predictors of poor obstetrical outcome or kidney worsening. Peculiar condition, as with kidney transplanted mothers, the onset of LN during pregnancy, or independent risk factors are also evaluated. Expert opinion: The improvement of LN therapies and better knowledge of the relationship has enormously enhanced the chance of uneventful pregnancies for LN women. A crucial step is to carefully plan the pregnancy with analysis of epidemiological, biological and therapeutic aspects that could interfere with the wellbeing of the mother and the child. Copyright © 2016 Informa UK Limited, trading as Taylor & Francis Group.

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Publisher
Characteristics of and outcomes for elderly patients with acute myocardial infarction: Differences between females and males.
Thang N.D., Karlson B.W., Karlsson T., Herlitz J.
Embase
Clinical Interventions in Aging. 11 (pp 1309-1316), 2016. Date of Publication: 21 Sep 2016.
[Article]
AN: 612289950
Objectives: This study analyzed age-adjusted sex differences among acute myocardial infarction (AMI) patients aged 75 years and above with regard to 7-year mortality (primary end point) and the frequency of angiograms and admission to the coronary care unit (CCU) as well as 1-year mortality (secondary end points). Methods: A retrospective cohort study comprised 1,414 AMI patients (748 females and 666 males) aged at least 75 years, who were admitted to Sahlgrenska University Hospital in Gothenburg, Sweden, during two periods (2001/2002 and 2007). All comparisons between female and male patients were age adjusted. Results: Females were older and their previous history included fewer AMIs, coronary artery bypass grafting procedures, and renal diseases, but more frequent incidence of hypertension. On the contrary, males had higher age-adjusted 7-year mortality in relation to females (hazard ratio [HR] 1.16 with corresponding 95% confidence interval [95% CI 1.03, 1.31], P=0.02). Admission to the CCU was more frequent among males than females (odds ratio [OR] 1.38 [95% CI 1.11, 1.72], P=0.004). There was a nonsignificant trend toward more coronary angiographies performed among males (OR 1.34 [95% CI 1.00, 1.79], P=0.05), as well as a nonsignificant trend toward higher 1-year mortality (HR 1.18 [95% CI 0.99, 1.39], P=0.06). Conclusion: In an AMI population aged 75 years and above, males had higher age-adjusted 7-year mortality and higher rate of admission to the CCU than females. One-year mortality did not differ significantly between the sexes, nor did the frequency of performed coronary angiograms. Copyright © 2016 Thang et al.

Status
Investigation and Management of Erythrocytosis.
McMullin M.F.

Embase

Current Hematologic Malignancy Reports. 11 (5) (pp 342-347), 2016. Date of Publication: 01 Oct 2016.

[Review]
AN: 611262020

An absolute erythrocytosis is present when the red cell mass is greater than 125% of the predicted value for sex and body mass. It can have a primary or secondary and congenital or acquired cause. New causes particularly congenital continue to be discovered and investigated. Investigation for the cause starts with repeat and confirmation of the raised hemoglobin and measurement of an erythropoietin level to indicate whether to pursue primary or secondary causes and then further investigations as appropriate. Management options include low dose aspirin and venesection. Specific management advice is available for certain specific clinical situations. Copyright © 2016, Springer Science+Business Media New York.

Status
EMBASE
Anaesthesia recommendations for patients suffering from Liddle’s syndrome.
McCaul C., Caulfield K., Sinha R., Ellison D.
Embase
Anasthesiologie und Intensivmedizin. 57 (9) (pp S500-S505), 2016. Date of Publication: September 2016.
[Article]
AN: 612224604
The clinical phenotype resembles primary hyperaldosteronism, and the presenting feature is typically hypertension in teenage years. Patients are often asymptomatic. Renal impairment may occur due to hypertension. Muscle weakness in combination with severe hypertension has been reported in elderly population with the syndrome [2]. The defining factor in the diagnosis is evidence of suppressed aldosterone levels, and the lack of response to treatment with the mineralocorticoid receptor blocker spironolactone [6;7]. Metabolic abnormalities can be corrected by dietary salt restriction, and administration of antagonists of the epithelial sodium channel such as amiloride or triamterene [8]. Renal transplantation has been used as treatment.
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Heparin infusion in simultaneous pancreas and kidney transplantation reduces graft thrombosis and improves graft survival.


Embase
Clinical Transplantation. 30 (9) (pp 1002-1009), 2016. Date of Publication: 01 Sep 2016.

Introduction: Thrombosis of the pancreas after transplantation is the most common cause of relaparotomy and resultant graft loss. There is currently no standard protocol consistently proven to prevent thrombosis following transplantation. Our objective was to determine whether our protocol of post-operative low-dose intravenous (IV) heparin infusion would prevent graft thrombosis without additional complications in our patients. Methods: A total of 66 simultaneous pancreas kidney (SPK) transplants were performed at our institution from 2004 to 2014. Patients were divided into 2 retrospective cohort groups. Group 1 patients received only acetylsalicylic acid (ASA) 81 mg/d started on post-operative day 1. Group 2 patients received IV heparin infusion beginning in the recovery room at a rate of 500 IU/h for the first 24 hours, reduced by 100 IU/h every day to stop on day 5, and then received ASA 81 mg/d afterward. Outcome and complication rates were compared between the two groups for 5 years post-transplant. Results: We observed a significant reduction in graft thrombosis and graft loss with (0/29) patients in the heparin group vs (7/33) 25.7% from the non-heparin (P<.01) with no differences in complication rates. Conclusions: We present a heparin infusion protocol which may help prevent graft thrombosis and graft loss in SPK transplantation. Copyright © 2016 John Wiley & Sons A/S.
Donor Monoclonal Gammopathy May Cause Lymphoproliferative Disorders in Solid Organ Transplant Recipients.
Embase
American Journal of Transplantation. 16 (9) (pp 2676-2683), 2016. Date of Publication: 01 Sep 2016.
[Article]
AN: 611937074
Prior research on donor monoclonal gammopathy of undetermined significance (MGUS) has been inadequate regarding the risk for lymphoproliferative disease in solid organ transplantation recipients. Seven organ recipients from two different donors developed lymphoproliferative disease. The origin of the malignancy was determined by use of microsatellite analysis, and the plasma of the two donors was analyzed with the use of electrophoresis. The clinical courses of the seven recipients were followed for 36-60 months. One donor transmitted lymphoplasmacytic lymphoma to two kidney recipients and MGUS to a liver recipient, all IgM kappa. A second donor
caused IgG lambda myeloma in two kidney and one liver recipient, and IgG lambda gammopathy in a heart recipient. Transplant nephrectomy was performed in three kidney recipients and remission was achieved. The fourth kidney recipient has kept the graft and the disease has progressed. The liver recipient died from myeloma. There were no clinical signs of lymphoproliferative disease in the donors, but retrospective serum analyses showed M-components, IgM kappa (37 g/L) and IgG lambda (8 g/L). Donors with MGUS may cause donor-transmitted malignancies via passenger lymphocytes/plasma cells in solid organ recipients. The results call for a large register study of the incidence of donor MGUS and lymphoproliferative disease in their recipients. © Copyright 2016 The American Society of Transplantation and the American Society of Transplant Surgeons

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2016

440.

Succinate Accumulation and Ischemia-Reperfusion Injury: Of Mice but Not Men, a Study in Renal Ischemia-Reperfusion.
Wijermars L.G.M., Schaapherder A.F., Kostidis S., Wust R.C.I., Lindeman J.H.
Embase
A recent seminal paper implicated ischemia-related succinate accumulation followed by succinate-driven reactive oxygen species formation as a key driver of ischemia-reperfusion injury. Although the data show that the mechanism is universal for all organs tested (kidney, liver, heart, and brain), a remaining question is to what extent these observations in mice translate to humans. We showed in this study that succinate accumulation is not a universal event during ischemia and does not occur during renal graft procurement; in fact, tissue succinate content progressively decreased with increasing graft ischemia time (p < 0.007). Contrasting responses were also found with respect to mitochondrial susceptibility toward ischemia and reperfusion, with rodent mitochondria robustly resistant toward warm ischemia but human and pig mitochondria highly susceptible to warm ischemia (p < 0.05). These observations suggest that succinate-driven reactive oxygen formation does not occur in the context of kidney transplantation. Moreover, absent allantoin release from the reperfused grafts suggests minimal oxidative stress during clinical reperfusion. © Copyright 2016 The American Society of Transplantation and the American Society of Transplant Surgeons

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20160903

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2016
Dynamics and epitope specificity of anti-human leukocyte antibodies following renal allograft nephrectomy.
Lachmann N., Schonemann C., El-Awar N., Everly M., Budde K., Terasaki P.I., Waiser J.
Embase
Nephrology Dialysis Transplantation. 31 (8) (pp 1351-1359), 2016. Date of Publication: 01 Aug 2016.
[Article]
AN: 611735920

Background
A considerable proportion of patients awaiting kidney transplantation is immunized by previous transplantation(s). We investigated how allograft nephrectomy (Nx) and withdrawal of maintenance immunosuppression (WD-MIS) in patients with a failed renal allograft contribute to allosensitization.

Methods
HLA antibodies (HLAabs) were analyzed before and after Nx and/or WD-MIS using a single antigen bead assay. Patients were grouped as follows: (A) Nx and concomitant WD-MIS (n = 28), (B) Nx (n = 14) and (C) WD-MIS (n = 12). In a subgroup of patients, the epitope specificity of HLAabs was determined by adsorption and elution of sera with recombinant single HLA allele-expressing cell lines.

Results
Following Nx and/or WD-MIS, HLAabs were detectable in 100, 100 and 92% of patients in Groups A, B and C, respectively. In patients of all groups, de novo donor-specific HLAabs (DSAs) were found. After Nx, an increase in the breadth [percent panel reactive antibody (%PRA)] and mean fluorescence intensity of class I HLAabs was predominant. In contrast, an increase of class II HLAabs prevailed following WD-MIS. Experimental analysis of the epitope specificities revealed that 64% of the class I HLAabs classically denoted as non-DSA were donor epitope-specific HLAabs (DESA).

Conclusions
Both Nx and WD-MIS contribute to alloimmunization with differing patterns concerning class I and II HLAabs. Nx preferentially increased class I HLAabs and most of the observed class I HLAabs were DESA. Considering that class I, but not class II, HLA molecules are constitutively expressed, our results support the hypothesis that the increase of HLAabs following Nx might have been caused by removal of the adsorbing donor tissue (sponge hypothesis). Copyright © 2016 The Author 2016.

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Simforoosh N., Obeid K., Javanmard B., Rezaeetalah G.H., Razmjoos S., Soltani M.H.
Embase
Experimental and Clinical Transplantation. 14 (4) (pp 385-388), 2016. Date of Publication: August 2016.
[Article]
AN: 611615824
Objectives: Inserting a double J stent during kidney transplant has reduced the rate of urologic complications. Traditionally, a double J stent is removed via endoscopic intervention. Here, we assessed the safety and efficacy of a nonoperative method for double J stent removal. Materials and Methods: Our study group included 200 consecutive patients who underwent kidney transplant from January 2013 to April 2014. Group A consisted of 100 recipients who had a double J stent that was tied to a Foley catheter with 2-0 silk suture. The stent was simply removed by taking out the Foley catheter after 3 weeks. Patients in group A were compared with a second group of 100 kidney transplant patients whose stents were removed endoscopically 3 weeks later (group B). Results: Patients were matched between the 2 groups regarding age distribution, male-to-female patient ratio, deceased versus living donor graft, prevalence of type 2 diabetes mellitus, and body mass index. The incidence of urinary fistula (3% in group A and 4% in group B; P = .7), ureteral stenosis (1% in group A and 2% in group B; P = .56), wound infection (1% in group A and 2% in group B; P = .56), and positive urine culture (20% in group A and 29% in group B; P = .14) after stent removal were not significantly different between the 2 groups. Conclusions: This study shows that nonoperative removal of a double J stent is a safe and
effective method. This approach is simple, and there is no need for a surgical procedure or any outpatient surgical intervention. Copyright © Baskent University 2016 Printed in Turkey. All Rights Reserved.

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Publisher
Baskent University (26 Austin Avenue, Baglica Kampusu, P.O. Box 337, Ankara 06530, Turkey)
Date Created
20160812
Year of Publication
2016

443.
High mortality in diabetic recipients of high KDPI deceased donor kidneys.
Pelletier R.P., Pesavento T.E., Rajab A., Henry M.L.
Embase
Clinical Transplantation. 30 (8) (pp 940-945), 2016. Date of Publication: 01 Aug 2016.
[Article]
AN: 611541576
Background: Deceased donor (DD) kidney quality is determined by calculating the Kidney Donor Profile Index (KDPI). Optimizing high KDPI (>=85%) DD transplant outcome is challenging. This retrospective study was performed to review our high KDPI DD transplant results to identify clinical practices that can improve future outcomes. Methods: We retrospectively calculated the KDPI for 895 DD kidney recipients transplanted between 1/2002 and 11/2013. Age, race, body mass index (BMI), retransplantation, gender, diabetes (DM), dialysis time, and preexisting coronary artery disease (CAD) (previous myocardial infarction (MI), coronary artery bypass (CABG), or stenting) were determined for all recipients. Results: About 29.7% (266/895) of transplants were from donors with a KDPI >=85%. By Cox regression older age, diabetes, female gender, and dialysis time >4 years correlated with shorter patient survival time. Diabetics with
CAD who received a high KDPI donor kidney had a significantly increased risk of death (HR 4.33
(CI 1.82-10.30), P=.001) compared to low KDPI kidney recipients. The Kaplan-Meier survival
curve for diabetic recipients of high KDPI kidneys was significantly worse if they had preexisting
CAD (P<.001 by log-rank test). Conclusion: Patient survival using high KDPI donor kidneys may
be improved by avoiding diabetic candidates with preexisting CAD. Copyright © 2016 John
Wiley & Sons A/S. Published by John Wiley & Sons Ltd
PMID
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Columbus, OH, United States
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Year of Publication
2016

444.
Risk factors and outcome of stroke in renal transplant recipients.
Findlay M.D., Thomson P.C., Maclsaac R., Jardine A.G., Patel R.K., Stevens K.K., Rutherford E.,
Clancy M., Geddes C.C., Dawson J., Mark P.B.
Embase
Clinical Transplantation. 30 (8) (pp 918-924), 2016. Date of Publication: 01 Aug 2016.
[Article]
AN: 611541561
Stroke incidence is high in end-stage renal disease, and risk factors differ between the dialysis
and general populations. However, risk factors and outcomes following renal transplantation
remain unclear. We analyzed all adult patients with a functioning renal transplant from 01/01/2007
to 12/31/2012. Data were extracted from the electronic patient record. Variables associated with stroke were identified by survival analyses; demographic, clinical, and imaging and laboratory variables were assessed and case fatality determined. Follow-up was until 05/12/2013. A total of 956 patients were identified (median age 40.1 years, 59.9% male). Atrial fibrillation (AF) prevalence was 9.2%, and 38.2% received a transplant during follow-up. A total of 26 (2.7%) experienced a stroke during 4409 patient-years of follow-up (84.6% ischemic). Stroke incidence was 5.96/1000 patient-years. Factors associated with stroke on regression analysis were prior stroke, diabetes, age, systolic hypertension, and hemoglobin. Atrial fibrillation was associated with time to stroke (P<0.001). Warfarin did not associate with ischemic stroke risk in those with AF. Fatality was 19.2% at 7, 23.1% at 28, and 42.3% at 365 days after stroke. Patients with a functioning renal transplant have a high stroke incidence and case fatality. Unlike those on hemodialysis, risk factors are similar to the general population. We did not demonstrate benefit from warfarin use in those with AF. Copyright © 2016 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd

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445.
Predicting renal recovery after liver transplant with severe pretransplant subacute kidney injury: The impact of warm ischemia time.
Identifying which liver transplantation (LT) candidates with severe kidney injury will have a full recovery of renal function after liver transplantation alone (LTA) is difficult. Avoiding unnecessary simultaneous liver-kidney transplantation (SLKT) can optimize the use of scarce kidney grafts. Incorrect predictions of spontaneous renal recovery after LTA can lead to increased morbidity and mortality. We retrospectively analyzed all LTA patients at our institution from February 2002 to February 2013 (n = 583) and identified a cohort with severe subacute renal injury (n = 40; creatinine <2 mg/dL in the 14-89 days prior to LTA and not on renal replacement therapy [RRT] yet, >=2 mg/dL within 14 days of LTA and/or on RRT). Of 40 LTA recipients, 26 (65%) had renal recovery and 14 (35%) did not. The median (interquartile range) warm ischemia time (WIT) in recipients with and without renal recovery after LTA was 31 minutes (24-46 minutes) and 39 minutes (34-49 minutes; P = 0.02), respectively. Adjusting for the severity of the subacute kidney injury with either Acute Kidney Injury Network or Risk, Injury, Failure, Loss, and End-Stage Kidney Disease criteria, increasing WIT was associated with lack of renal recovery (serum creatinine <2 mg/dL after LTA, not on RRT), with an odds ratio (OR) of 1.08 (1.01-1.16; P = 0.03) and 1.09 (1.01-1.17; P = 0.02), respectively. For each minute of increased WIT, there was an 8%-9% increase in the risk of lack of renal recovery after LTA. In a separate cohort of 98 LTA recipients with subacute kidney injury, we confirmed the association of WIT and lack of renal recovery (OR, 1.04; P = 0.04). In LT candidates with severe subacute renal injury, operative measures to minimize WIT may improve renal recovery potentially avoiding RRT and the need for subsequent kidney transplant. Liver Transplantation 22 1085-1091 2016 AASLD. Copyright © 2016 American Association for the Study of Liver Diseases
Clinical guides for atypical hemolytic uremic syndrome in Japan.
Embase
Clinical and Experimental Nephrology. 20 (4) (pp 536-543), 2016. Date of Publication: 01 Aug 2016.
[Review]
AN: 611262004
Atypical hemolytic uremic syndrome (aHUS) is a rare disease characterized by the triad of microangiopathic hemolytic anemia, thrombocytopenia, and acute kidney injury. In 2013, we developed diagnostic criteria to enable early diagnosis and timely initiation of appropriate treatment for aHUS. Recent clinical and molecular findings have resulted in several proposed classifications and definitions of thrombotic microangiopathy and aHUS. Based on recent advances in this field and the emerging international consensus to exclude secondary TMAs from the definition of aHUS, we have redefined aHUS and proposed diagnostic algorithms, differential diagnosis, and therapeutic strategies for aHUS. Copyright © 2016, Japanese Society of Nephrology and Japan Pediatric Society.
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447.
Evaluation of surgical technique in living donor kidney transplantation.

Embase
New Armenian Medical Journal. 10 (2) (pp 80-87), 2016. Date of Publication: 2016.

[Article]
AN: 611413167
Current study presents analysis of the frequency and nature of intra-operative, early and late post-operative surgical complications of kidney transplantation from living donors taking into account the sides of nephrectomy and implantation, the types of vascular and ureteral anastomoses, as well as the position of the transplanted kidneys. The study included 98 patients who had undergone living donor kidney transplantation at Arabkir Medical Centre between 2002 and 2012. In the majority of cases (80%) donor-nephrectomy was performed with kidney implantation from left to the right iliac area of the recipient (n=75). Out of 20 cases of right-sided donor-nephrectomy, left-sided implantation was performed in 18 patients, whereas right-sided - in 2. Three recipients out of 98 had kidney implanted in upturned upside-down position, with upper pole down, in order to avoid vascular kinking. The number of patients with 1 kidney artery was 86 (87.8%), 12 had additional arteries, six of them were anastomosed with lower epigastric artery and the rest were combined in a single trunk. Kidney artery was anastomosed with external (73.5%), internal (19.4%) or common (7.1%) iliac artery. In all cases donor kidney ureter implantation was performed according to Lich-Gregoir technique mainly with application of urethral stent. The latter was removed on average in 15 weeks, whereas the urethral catheter - on day 5-6 post operation. Main complications were intra-operative bleeding (6), post-operative bleeding (3), lymphocele (9), delayed function of the transplant kidney caused by long warm ischemia (9), arterial thrombosis (3), urethral stenosis (2), stenosis of distal part of ureter (3), proximal (1) and necrosis of distal part of ureter (1), which were successfully corrected in the subsequent surgical interventions. The loss of transplant kidney in various phases of kidney transplantation was detected in 11 cases. The analysis of early and late post-operative complications showed that in majority of cases the complications after kidney transplantation from living donor were technical in nature, which is possible to avoid by improving the surgical technique. The donor kidneys with specific anatomical structures can be successfully transplanted without affecting the function of transplanted kidney. Copyright © 2016 Yerevan State Medical University after Mkhitar Heratsi. All Rights Reserved.

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Institution
In 1996 we performed tandem membrane plasma exchange-hemodialysis in a 3-year-old girl and tandem immunoadsorption-hemodialysis with citrate as the only anticoagulant in a patient with Goodpasture's syndrome. In the present study, we evaluated the feasibility, efficacy and safety of 24 tandem plasma exchange/immunoadsorption hemodialysis procedures in four different circuit setups with citrate as the only anticoagulant. In two setups, the tandem procedures were connected in series (plasma exchange hemodialysis and immunoadsorption hemodialysis), while in the other two setups they were in parallel (plasma exchange hemodialysis with independent blood circuits and plasma exchange hemodialysis with independent arterial blood lines, but with a common return line). All tandem procedures were feasible, efficient and safe. No serious side-effects were recorded. The most elegant setup was the procedure with independent, parallel blood circuits. However, serial tandem procedures provided for the elimination of citrate and normalization of electrolytes before blood was returned to the patient. Copyright © 2016 International Society for Apheresis, Japanese Society for Apheresis, and Japanese Society for Dialysis Therapy

PMID
Citrate has many characteristics of the ideal anticoagulant for hemodialysis. In addition to immediate and complete anticoagulation in the dialysis circuit, citrate has important effects beyond anticoagulation, mainly in reducing inflammatory response induced by hemodialysis. Citrate has already become the standard anticoagulant in acute kidney injury requiring continuous renal replacement therapy (CRRT), both for adults and children, with the citrate module being a part of modern CRRT monitors. Although the citrate module is not yet available for intermittent hemodialysis, precise infusion pumps, point-of-care ionometers and high citrate clearance from high flux dialyzers increase safety while reducing the risk of metabolic complications, both in adult and pediatric patients. Slovenia has a long tradition, high volume and expansion of citrate use in hemodialysis, including long-term citrate anticoagulation in selected patients. At the Department of Nephrology, University Medical Centre Ljubljana, more than 10 000 citrate procedures were performed in 2015. We believe that regional citrate anticoagulation may replace heparin as the main anticoagulant for intermittent hemodialysis in the not so distant future. Copyright © 2016
Pancreas Transplantation From Living Donors: A Single Center Experience of 20 Cases.
Choi J.Y., Jung J.H., Kwon H., Shin S., Kim Y.H., Han D.J.

American Journal of Transplantation. 16 (8) (pp 2413-2420), 2016. Date of Publication: 01 Aug 2016.
[Article]
AN: 611337445

Living donor pancreas transplantation (LDPT) has several advantages over deceased donor pancreas transplantation (DDPT), including better HLA matching, shorter ischemic time, and shorter waiting time. It remains an attractive option for diabetes mellitus (DM) patients with end stage renal disease. We reviewed 20 cases of LDPT performed in Asan Medical Center between October 1992 and March 2015. Six cases (30%) were pancreas transplantation alone (PTA), and the rest (70%) were simultaneous pancreas and kidney transplantation (SPK). Relations of donor and recipient were parents in 7 (35%), siblings in 6 (30%), spouse in 6 (30%), and cousin in 1 (5%). Graft survival in SPK at 1, 3, 5, and 10 years was 91.7%, 83.3%, 83.3%, and 83.3%, respectively, and that in PTA recipients was 50%, 33.3%, 16.7%, and 16.7%, respectively (p =
Causes of graft failure in SPK were thrombosis (one case), and rejection (one case), whereas those in PTA were noncompliance (two cases), thrombosis (one case), reflux pancreatitis (one case), and chronic rejection (one case). In terms of pancreas exocrine drainage, two grafts (25%) maintained their function in bladder drainage, while all grafts maintained in enteric drainage p < 0.05). Seven (35%) donors experienced minor pancreatic juice leakage and one underwent reoperation due to postoperative hematoma. Most donors maintained normoglycemia and normal renal function. However, two donors developed DM (at 1 and 90 months postdonation), and were treated with oral hypoglycemic agents. Graft survival in PTA recipients was poorer than in SPK due to poor compliance and bladder drainage-related problems. The surgical and metabolic complication rates of donors can be minimized by applying strict donor criteria. Therefore, LDPT with enteric drainage is an acceptable treatment for SPK. © Copyright 2016 The American Society of Transplantation and the American Society of Transplant Surgeons
Increased prevalence of eosinophilia in a hemodialysis population: Longitudinal and case control studies.

Hildebrand S., Corbett R., Duncan N., Ashby D.

Embase

Hemodialysis International. 20 (3) (pp 414-420), 2016. Date of Publication: 01 Jul 2016.

[Article]

AN: 611314732

Eosinophilia is commonly found in patients with clinical reactions to the hemodialysis circuit. With modern membranes, such reactions have become less common, but they may be under diagnosed in patients with subtle symptoms, in whom the presence of eosinophilia is an important diagnostic feature. Two case reports are presented, along with a hemodialysis study of the frequency and clinical associations of eosinophilia. In three hemodialysis facilities, all current hemodialysis patients with persistent eosinophilia (greater than 1 x 10⁹/L for 3 months) were identified. Control patients without eosinophilia (less than 0.5 x 10⁹/L for 3 months) matched for age, gender, and ethnicity were identified from the same facilities. A historical cohort of patients, dialyzing at the same facilities 5 years ago, was screened for the presence of persistent eosinophilia. From 510 patients, 24 cases of persistent eosinophilia were identified (4.7%). The median eosinophil count was 1.75 x 10⁹/L (range 1.1-7.5 x 10⁹/L). The prevalence in a historical cohort 5 years previously was significantly less at 1.5% (P = 0.046). Compared to controls,
patients with eosinophilia were more likely to be on an angiotensin converting enzyme inhibitor (41.7% vs. 12.5%, P = 0.049), had a lower C-reactive protein (10 vs. 24 mg/L, P = 0.02) and were more likely to be using a fistula for access (P = 0.049). Over the following 12 months, there was no difference in the mean number of hospital admission days between cases and controls (7.6 vs. 11.5 days, P = 0.54), and no difference in mortality over 29 months (25.0% vs. 29.2%, P = 1.00).

Eosinophilia remains not uncommon in hemodialysis patients, and in most cases reflects allergy to components of the dialysis circuit, which is usually subclinical. The overall prognosis for asymptomatic patients appears to be favourable. Copyright © 2016 International Society for Hemodialysis

Status EMBASE
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453.
The effect of pre-operative methylprednisolone on the incidence of delayed graft function in renal transplantation.
Fong N.J.M., Fan P.Y.W., Fook-Chong S.M.C., Kee T.Y.S.
Embase Proceedings of Singapore Healthcare. 25 (2) (pp 122-126), 2016. Date of Publication: 2016.
[Article]
AN: 611337384
Introduction: This study explores the effect of different corticosteroid administration timings on the incidence of slow/ delayed graft function. Methods: One hundred and twelve kidney transplants
from January 2011 to March 2014 were retrospectively analysed. Thirty-six cases were excluded because they were donor-specific antibody positive (n=16), received thymoglobulin/ plasma exchange (n=11), were ABO-incompatible (n=6) or suffered graft loss from vascular thrombosis within the first week post-transplant (n=3). The study period straddled three eras of corticosteroid administration, from intra-operative intravenous (IV) hydrocortisone (Era 1; n=26), to intra-operative IV methylprednisolone (Era 2; n=38) and pre-operative IV methylprednisolone (Era 3; n=12). The primary endpoint was the incidence of slow/delayed graft function. Secondary outcomes included estimated glomerular filtration rate at discharge and 120 and 365 days, rejection (acute and one-year), wound complications, post-transplant diabetes, increase in low-density lipoprotein or body mass index, and cytomegalovirus or BK viraemia within one year. Results: On univariate analysis, pre-operative methylprednisolone was associated with lower incidence of slow/delayed graft function (17%, 55%, 58% in Eras 3, 2, 1 respectively; p=0.041), superior estimated glomerular filtration rate at discharge (median 56, 37 and 43 ml/min for Eras 3, 2, 1 respectively; p=0.033) and at 120 days (median 60, 52, and 46 ml/min for Eras 3, 2, 1 respectively; p=0.017). On multivariate analysis, pre-operative IV methylprednisolone (vs. Eras 1 and 2 combined; odds ratio 4.79 (90% confidence interval 1.16-19.80); p=0.07) and living donor type (vs. deceased; odds ratio 5.56 (90% confidence interval 2.25-13.77); p=0.002) were associated with lower incidence of slow/delayed graft function. Conclusion: Pre-operative methylprednisolone was associated with reduced slow/delayed graft function and improved early estimated glomerular filtration. Copyright © The Author(s) 2015.
Antiphospholipid syndrome is an autoimmune disorder characterized by vascular thromboses and pregnancy morbidity associated with antiphospholipid antibodies: lupus anticoagulant, IgG or IgM anticardiolipin or anti-beta 2-glycoprotein I. The kidney is one of the major target organs in antiphospholipid syndrome (APS). However, beyond the known involvement of the kidney in primary and associated APS, we may be observing a new form of APS within the context of renal failure. This review describes the classical kidney manifestations of APS and provides new considerations to be taken into account. Copyright © 2016 by the authors; licensee MDPI, Basel, Switzerland.

Perioperative Complications After Living Kidney Donation: A National Study.
We integrated the US transplant registry with administrative records from an academic hospital consortium (97 centers, 2008-2012) to identify predonation comorbidity and perioperative complications captured in diagnostic, procedure, and registry sources. Correlates (adjusted odds ratio, aOR) of perioperative complications were examined with multivariate logistic regression.

Among 14,964 living kidney donors, 11.6% were African American. Nephrectomies were predominantly laparoscopic (93.8%); 2.4% were robotic and 3.7% were planned open procedures. Overall, 16.8% of donors experienced a perioperative complication, most commonly gastrointestinal (4.4%), bleeding (3.0%), respiratory (2.5%), surgical/anesthesia-related injuries (2.4%), and "other" complications (6.6%). Major Clavien Classification of Surgical Complications grade IV or higher affected 2.5% of donors. After adjustment for demographic, clinical (including comorbidities), procedure, and center factors, African Americans had increased risk of any complication (aOR 1.26, p = 0.001) and of Clavien grade II or higher (aOR 1.39, p = 0.0002), grade III or higher (aOR 1.56, p < 0.0001), and grade IV or higher (aOR 1.56, p = 0.004) events. Other significant correlates of Clavien grade IV or higher events included obesity (aOR 1.55, p = 0.0005), predonation hematologic (aOR 2.78, p = 0.0002) and psychiatric (aOR 1.45, p = 0.04) conditions, and robotic nephrectomy (aOR 2.07, p = 0.002), while annual center volume >50 (aOR 0.55, p < 0.0001) was associated with lower risk. Complications after live donor nephrectomy vary with baseline demographic, clinical, procedure, and center factors, but the most serious complications are infrequent. Future work should examine underlying mechanisms and approaches to minimizing the risk of perioperative complications in all donors. © Copyright 2015 The American Society of Transplantation and the American Society of Transplant Surgeons


Embase

Saudi journal of kidney diseases and transplantation: an official publication of the Saudi Center for Organ Transplantation, Saudi Arabia. 27 (3) (pp 563-568), 2016. Date of Publication: 01 May 2016.

[Article]
AN: 611728404

Kidney transplantation from living kidney donors (LKD) because of its good results represents a good option for the treatment of patients with the end-stage renal disease. Kidney donation is a relatively safe procedure according to several studies. We conducted this cross-sectional study in order to describe the demographic, clinical, and renal outcome of LKD in Cote d'Ivoire. From March to November 2014, LKD residing in Cote d'Ivoire at the time of investigation and having donated the kidney more than one year ago were considered for the study. They were evaluated through a questionnaire. Of the 29 LKD listed in Cote d'Ivoire, only 14 responded to the questionnaire. The mean age at donation was 43.29 +/- 9.12 years (27-59) and 10 of the LKD were women. Eight were related to the recipients, and the remaining were spouses. Laparoscopic
nephrectomy was performed in nine LKD. The left kidney was harvested in ten cases. The main motivation for donation in all donors was the desire to save a life. At the time of the survey, the average duration after the donation was 4.57 +/- 2.56 years (1-8). Only five donors had a regular nephrological follow-up. Hypertension was observed in one donor, seven had significant proteinuria, and six had glomerular filtration rate <60 mL/min but >30 mL/min. Significantly higher proteinuria was noted in donors under 45 years as compared to those over 45 years (0.43 +/- 0.17 g/24 h vs. 0.22 +/- 0.03 g/24 h, P = 0.01). Our study suggests that renal disease in LKD in Cote d'Ivoire is low after a mean follow-up period of four years. A donor registry is essential to ensure better follow-up of donors in order to detect potential adverse effects of kidney donation in the medium as well as in the long-term.


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The proceedings contain 91 papers. The topics discussed include: experience with 750 consecutive retroperitoneal laparoscopic living donor nephrectomy; can we use ulinastatin in post renal transplant severe sepsis?; nail patella syndrome (NPS); role of C1Q SAB assay in prediction of kidney transplantation outcome in highly sensitized patients; operating room challenges for the scrub nurse during renal transplantation; awareness, knowledge and attitudes about organ donation among operating room and kidney transplant unit nurses; impact of pre and post transplant 25(OH) Vit-D levels on graft function in living related kidney transplant recipients; the use of PTFE external iliac artery interposition graft as salvage in atherosclerosed iliac vessels; non-heart beating tissue donation - nurse transplant coordinator can make a difference; double-j stent placement for ureteric reimplantation and routine stenting in kidney transplantation: retrospective analysis of 225 cases; robotic kidney transplant - our initial experience and technique. robotic kidney transplant - our initial experience and technique; safe vascular control in laparoscopic donor nephrectomy: an experience of more than 1400 cases; and deceased donor renal transplant graft survival - a single center experience.
The proceedings contain 1453 papers. The topics discussed include: comparison of the rate of decline of GFR and 1.5 and 10 year outcomes of live kidney donors - UK cohort study; the percentage of CD19 positive cells in lymphocytes can predict acute antibody-mediated rejection after administration of rituximab in ABO-incompatible kidney transplantation; ABO incompatible renal transplantation without splenectomy or anti-CD20 treatment: comparison with ABO compatible renal transplant; HLA identical renal transplants. immunologically privileged why do they fail?; retroperitoneal versus intraperitoneal hand assisted laparoscopic donor nephrectomy: a case matched study; different sensitivity of rituximab-treatment to B-cells between ABO incompatible kidney and liver transplantation; and immunosuppressive myeloid cells in patients given combined kidney and hematopoietic cell transplants in a tolerance protocol with TLI and ATG conditioning.

459.
Hepatitis C and Human Immunodeficiency Virus Kidney Transplantation: The Mount Sinai Experience.
Nair V; Khaim R; El-Salem F; Kent R; Lerner S; Berger A; Miko L; Rollins B; Ebcioğlu Z; Delaney V; Sehgal V; Menon M; Ames S; Benvenisty A; Wadhera V; Arvelakas A; Schiano T; Rana M; Huprikar S; Florman S; Shapiro R.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present Clinical Transplants. 31:69-78, 2015.
Mount Sinai Hospital in New York has a long history in the field of organ transplantation. The first kidney transplant at Mount Sinai was performed in 1967 by the late Dr. Lewis Burrows and the first laparoscopic donor nephrectomy in New York was performed at Mount Sinai in 1996. Over 3000 kidney transplantations have been performed at Mount Sinai. In the early 1990s, the first hepatitis C virus (HCV) positive patient at Mount Sinai underwent a kidney transplant and the first kidney transplant in a patient with human immunodeficiency virus (HIV) in New York was performed at Mount Sinai in 2001. In general, these patients have done well after renal transplantation, with outcomes similar to those seen in non-infected patients. This chapter will describe the evolution of immunosuppressive regimens in HCV positive and HIV positive patients, and will describe the outcomes of kidney transplantation in these patients. Given the favorable outcomes, it is reasonable to continue to offer renal transplantation as a treatment for end stage renal disease patients with HCV and/or HIV.

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460.
Kidney transplant outcomes following the introduction of hand-assisted laparoscopic living donor nephrectomy: a comparison of recipient groups.

Schamm M; Jugmohan B; Joseph C; Botha JR; Botha JF; Britz R; Loveland J.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]
UI: 28240487

BACKGROUND: Laparoscopic donor nephrectomy has become the procedure of choice for living donor kidney transplantation in many centres. We report on our experience with hand-assisted laparoscopic donor nephrectomy (HALDN). We concentrated on graft function and postoperative surgical complications in the recipient population, and compared outcomes to a similar recipient group who had received kidneys procured by open living-donor nephrectomy (OLDN).

METHOD: Following the receipt of institutional approval, the files of all patients who received a kidney transplant between September 2008 and June 2011 were reviewed. One hundred patients with end-stage renal disease received kidney transplantations from living donors. OLDN was performed in 65 donors, and 35 underwent HALDN. Delayed graft function (DGF) and postoperative complications were recorded.

RESULTS: Six adverse events were reported, during which five patients presented with DGF. One DGF was reported in the HALDN group, and four in the OLDN group. The morbidity in the HALDN group (1/35, 3%) was a graft rupture secondary to acute rejection which required exploration and transplant nephrectomy. Reoperation was required in five patients in the OLDN group (5/65, 8%). This amounted to overall morbidity of 6%, with no recipient mortalities.

CONCLUSION: As previously documented, HALDN is safe for the donor, and not inferior to OLDN. In this study, it was associated with neither an increased incidence of DGF, nor a higher complication rate in the transplant recipient, when compared to the cohort that received a kidney harvested using the OLDN technique.
Kidneys are the organs that remove the waste products of the metabolic activities. A smooth blood flow to the kidneys is essential to maintain their function. Abnormalities of the renal vasculature may result not only in impairing the renal function but can lead to conditions like varicocele. During an autopsy of an adult male, we observed renal vascular variations. The left renal vein had a retro-aortic course before its termination into the inferior vena cava. It was joined with the inferior vena cava at the level of inferior mesenteric artery with an acute angle. The left testicular vein joined the left renal vein with an acute angle. The right kidney was supplied by two renal arteries. The knowledge about retro-aortic course of the left renal vein may be important during renal transplantation. The oblique course of left renal vein and the termination of left testicular vein into it with an acute angle may increase the chances of left sided varicocele.
Frongia M; Cadoni R; Solinas A.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 27500234

BACKGROUND: Open surgery is the gold standard procedure for kidney transplantation. There is a strong rationale for using minimally invasive surgery in patients with end-stage renal disease. A robotic-assisted dual kidney transplant was performed for the first time at our institution.

METHODS: In August 2013, a 63-year-old man with end-stage renal disease and diabetes mellitus under pharmacological control received both kidneys from a 70-year-old marginal donor. Pretransplant donor biopsy demonstrated a bilateral Karpinski score greater than 5. The organs did not exhibit malformations and each had an artery and a vein. The procedure was carried out by a 7-port intraperitoneal approach using the da Vinci surgical system. The procedure was identical for the 2 kidneys except that mobilization of the sigmoid colon was required to introduce
the left graft. The renal vessels were anastomosed to the left external iliac vessels. The novel aspect of the technique was the introduction of both grafts through a single, 7-cm upper midline incision.

RESULTS: Total operative time was 400 minutes and blood loss was 120 mL. Both grafts immediately began functioning. There were no intraoperative or postoperative complications. The patient was discharged on the seventh postoperative day with normal renal function. At 24 months, he is well and does not require hemodialysis.

CONCLUSIONS: Minimally invasive robotic-assisted technology is a promising technique that provides exceptional patient outcomes by reducing operative morbidity, immobilization, and time to recovery, while affording better esthetic results. Selected patients with multiple comorbidities benefit most. Grafts from marginal donors are an extremely valuable resource.

Experience of a Maastricht type II non heart beating donor program in a small city: preliminary results.

Minambres E; Suberviola B; Guerra C; Lavid N; Lassalle M; Gonzalez-Castro A; Ballesteros MA.
OBJECTIVE: To study the results of a non-controlled cardiac death (Maastricht type II) donor program in a city of 200,000 inhabitants. The study was initially focused on lung donation and was extended to kidney donation after 9 months.

DESIGN: A prospective observational study was conducted between October 2012 and December 2013.

SETTING: The Intensive Care Unit of Marques de Valdecilla University Hospital in Santander (Spain), and surrounding areas.

POPULATIONS: Patients (< 55 years) who died of out-of-hospital cardiac arrest.

INTERVENTIONS: All out-of-hospital cardiac arrests were treated with mechanical cardiac compression (LUCAS II). The diagnosis of death and organ preservation were performed in the ICU.

RESULTS: A total of 14 calls were received, of which three were discarded. Of the 11 potential donors, 7 were effective donors with a median age of 39.5 years (range: 32-48). A total of 5 single lung transplants and four kidney transplants were performed. In addition, corneas and tissues were harvested. The non-valid donors were rejected mainly due to technical problems. There were no donation refusals on the part of the patient relatives. The lung transplant patient survival rate was 100% after one month and 80% after one year. One month after transplantation, the kidney recipients had a serum creatinine concentration of <2mg/dl. The interval from cardiac arrest to renal preservation was 80 minutes (range: 71-89), and the interval from cardiac arrest to lung preservation was 84 minutes (range: 77-94).

CONCLUSIONS: A Maastricht type II donation program in a small city is viable for both abdominal and thoracic organs. The program was initially very cautious, but its potential is easily improvable by increasing donor and by equipping mobile ICU ambulances with mechanical cardiac compression systems. Full management of the donor in the ICU, avoiding the emergency department or operating rooms, reduces the warm ischemia time, thereby improving transplant outcomes.

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Status MEDLINE

Authors Full Name
Minambres, E; Suberviola, B; Guerra, C; Lavid, N; Lassalle, M; Gonzalez-Castro, A; Ballesteros, M A.
Residency in urology and training in kidney transplantation. Results of a national survey.

Cabello-Benavente R; Gonzalez-Enguita C.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


[Journal Article]

UI: 25449295

OBJECTIVES: To determine the current state of kidney transplantation (KT) training in a country that is leader in organ donation and transplantation.

MATERIAL AND METHODS: We conducted an online survey by e-mail to 138 urology residents. The survey contained 5 sections: affiliation, training in KT, interest in KT, residents of transplant centers and residents of nontransplant centers.
RESULTS: Sixty-five residents responded, 47.1% of the urologists in training surveyed, representing 28 cities and 15 provinces. Fifty-five percent (n=36) of the respondents deemed the KT training offered during their residency as insufficient, and 85% (n=55) demanded more resources. More than half were not confident in their abilities to perform transplantation surgery over the course of their residency (n=35). Nineteen percent of the residents considered KT an important discipline in their residency, with a mean score of 56.2 (1-100). Among the residents of the transplant centers (69.2%, n=45), 73% (n=33) considered KT when choosing a center for their residency. Of the surveyed residents from nontransplant centers (30.7%, n=20), 45% (n=9) do not perform an external rotation in KT.

CONCLUSIONS: The surveyed residents demand more training in KT. The most common situation is to end a residency without having performed a complete KT. KT is considered an asset when selecting a resident medical intern position and commonly they are part of the transplantation team. The majority of residents are trained in centers with less than 75 transplants/year. External rotations in KT are not the rule in centers where transplantation is not performed.

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Iacoviello BM; Shenoy A; Braoude J; Jennings T; Vaidya S; Brouwer J; Haydel B; Arroyo H; Thakur D; Leinwand J; Rudow DL.

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[Journal Article. Research Support, Non-U.S. Gov't]

UI: 25975858

BACKGROUND: Psychosocial evaluation is an important part of the live organ donor evaluation process, yet it is not standardized across institutions, and although tools exist for the psychosocial evaluation of organ recipients, none exist to assess donors.

OBJECTIVE: We set out to develop a semistructured psychosocial evaluation tool (the Live Donor Assessment Tool, LDAT) to assess potential live organ donors and to conduct preliminary analyses of the tool's reliability and validity.

METHODS: Review of the literature on the psychosocial variables associated with treatment adherence, quality of life, live organ donation outcome, and resilience, as well as review of the procedures for psychosocial evaluation at our center and other centers around the country, identified 9 domains to address; these domains were distilled into several items each, in collaboration with colleagues at transplant centers across the country, for a total of 29 items. Four raters were trained to use the LDAT, and they retrospectively scored 99 psychosocial evaluations conducted on live organ donor candidates. Reliability of the LDAT was assessed by calculating the internal consistency of the items in the scale and interrater reliability between raters; validity was estimated by comparing LDAT scores between those with a "positive" evaluation outcome and "negative" outcome.

RESULTS: The LDAT was found to have good internal consistency, inter-rater reliability, and showed signs of validity: LDAT scores differentiated the positive vs. negative outcome groups.

CONCLUSIONS: The LDAT demonstrated good reliability and validity, but future research on the LDAT and the ability to implement the LDAT prospectively is warranted.

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Status

MEDLINE

Authors Full Name

Iacoviello, Brian M; Shenoy, Akhil; Braoude, Jenna; Jennings, Tiane; Vaidya, Swapna; Brouwer, Julianna; Haydel, Brandy; Arroyo, Hansel; Thakur, Devendra; Leinwand, Joseph; Rudow, Dianne LaPointe.
Noncontrast-Enhanced Magnetic Resonance Versus Computed Tomography Angiography in Preoperative Evaluation of Potential Living Renal Donors.
RATIONALE AND OBJECTIVES: Living renal donors undergo an extensive examination program. These examinations should be as safe, gentle, and patient friendly as possible. To compare computed tomography angiography (CTA) and an extensive magnetic resonance imaging (MRI) protocol without contrast agents to observations from nephrectomy in living renal donors and to evaluate whether noncontrast-enhanced MRI can replace CTA for vessel assessment in living renal donors.

MATERIAL AND METHODS: CTA and MRI results were compared to observations from nephrectomy, which served as the reference standard. Fifty-one potential kidney donors underwent imaging, and 31 donated a kidney. Comparisons in sensitivity, specificity, and accuracy were made with respect to the number of arteries, early branching, and the number of veins. Agreement was assessed using Cohen’s kappa. The exact McNemar's test was used to test for statistically significant differences.

RESULTS: In the assessment of more than one renal artery, the sensitivity and specificity of MRI and CTA were high and in perfect agreement compared to observations from surgery. The results for both MRI and CTA were as follows: (sensitivity 100%/specificity100%/accuracy 100%/Kappa = 1/P = 1). When comparing the ability to test for early branching we found, MRI: (sensitivity 33%/specificity 100%/accuracy 87%/Kappa = 0.45/P = 1) and CTA: (sensitivity 50%/specificity 100%/accuracy 90%/Kappa = 0.62/P = 1). When used to depict supernumerary veins, we found MRI: (sensitivity 60%/specificity 100%/accuracy 93%/Kappa = 0.72/P = 1), whereas CTA showed: (sensitivity 40%/specificity 96%/accuracy 87% Kappa = 0.43/P = 1).

CONCLUSIONS: In conclusion, an optimized MRI protocol that includes noncontrast-enhanced magnetic resonance angiography can be substituted for CTA for preoperative assessment of the renal vessels before living donor nephrectomy.
Male Gender and Body Mass Index Are Associated With Hypertension and Reduced Kidney Function 5 or More Years After Living Kidney Donation.
Bello RC; Bello VA; Rosa TT; Junqueira LF Jr; Freitas E; Veiga JP.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 26707294
BACKGROUND: The objective of this study was to evaluate renal function and to explore the relationship between some risk factors in kidney donors 12.37 +/- 7.60 years after donation.
PATIENTS AND METHODS: In a cross-sectional study conducted in a transplant unit, 77 nephrectomized subjects were assessed >=5 years after donation to evaluate their renal function and the presence or absence of hypertension, dyslipidemia, and microalbuminuria.

RESULTS: Twenty donors had an estimated glomerular filtration rate of <60 mL/min/1.73 m(2). Nine donors showed urinary albumin excretion of >20 mug/min (11.68%). Subjects with an EGFR of <60 mL/min were predominantly male and hypertensive and showed higher body mass index (BMI), higher uric acid, higher total cholesterol/high-density lipoprotein cholesterol (TC/HDL-C), and logarithm of triglycerides/HDL-C (log TG/HDL-C) ratios than donors with an EGFR of >60 mL/min. Hypertensive donors were older and had higher BMI, higher UA serum values, higher TC/HDL-C and log TG/HDL-C ratios and microalbuminuria than nonhypertensive donors (P < .005). A multivariate analysis was conducted and, after final adjustment, a filtration rate of <60 mL/min was 3.05 times higher in men than women, increased 10% for each 1-unit increase in BMI and was positively associated with log (TG/HDL-C). The frequency of hypertension increased by 10% for each 1-unit increase in BMI and was positively associated with microalbuminuria.

CONCLUSION: In this sample of kidney donors from a single transplant unit, >=5 years after donation, male sex and high BMI were positively associated with the presence of kidney failure.
Hand-assisted Laparoscopic Donor Nephrectomy and Cytokine Changes.
Field M; Guy A; Ready AR; Cobbold M; Inston N.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Research Support, Non-U.S. Gov't]
UI: 26680073

BACKGROUND: Laparoscopic living-donor nephrectomy (LDN) exerts systemic effects causing transaminitis and increased urinary neutrophil gelatinase-associated lipocalm (NGAL) excretion. Hand-assisted laparoscopic donor nephrectomy, which tends to be shorter with less pneumoperitoneum, may be hypothesized to produce less systemic stimulation than total laparoscopic LDN.

METHODS: Serial urine and serum samples were collected from 15 patients undergoing HALDN. Samples were analyzed for NGAL and kidney injury molecule 1 (KIM-1) levels preoperatively and 24 hours post-surgery. Data relating to alanine aminotransferase, creatinine, and estimated glomerular filtration rate was also analyzed in 48 live donors preoperatively and at 24 hours and 48 hours post-surgery and compared to published data on LDN.

RESULTS: Expected changes to creatinine and estimated glomerular filtration rates were observed in the donors. Compared to the preoperative levels, alanine aminotransferase levels showed a significant decrease at 24 hours (P = .004) and were not significantly different from baseline levels at 48 hours (P = .08). Serum KIM-1 and NGAL levels remained unchanged (P = .89 and P = .14, respectively) at 24 hours after donation. Similarly, urinary levels of KIM-1 and NGAL were not statistically significantly different after donation. Mean operating time for this cohort was 1 hour, 36 minutes.

CONCLUSIONS: In contrast to other published data, our cohort did not exhibit changes to liver function tests or biomarker changes after donor nephrectomy. This could be because of the lower operative time (96 minutes vs. 216 minutes) or because of the intermittent release of the pneumoperitoneum in the hand-assisted method which may exert less of a systemic inflammatory response.

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BACKGROUND: Kidneys from donors after brain death (DBD) cannot meet the demand for renal transplants in Andalusia.
METHODS: We analyzed the impact of using non-heart-beating donors (NHBD) in Andalusia from the start of this program to the present.

RESULTS: From 2010 to 2014, brain-death kidney donations remained at a standstill (1,635 in total) although NHBD increased from 2.4% to 16% annually, to 5% of the total (n = 164: 83 type II Maastricht [NHBD-T2] and 81 type III Maastricht [NHBD-T3]). The donors were more frequently men (T2 80.5% and T3 76.5% vs DBD 58.2%; P < .001). NHBD were younger (48.9 +/- 10.8 y vs DBD 53.3 +/- 16 y; P < .001); 11.6% of NHBD were >60 and 0% >70 years old, versus 39.4% and 15.2% of DBD, respectively; this is mostly explained by NHBD-T2 (48.9 +/- 10.8 y vs DBD 53.3 +/- 16 y). NHBD were used much less frequently than DBD in recipients over the age of 65 years or for retransplanted or hyperimmunized patients and never on priority recipients (children and combined transplant patients).

Blood groups differed significantly among different donor types (A, O, B, AB): NHBD-T2 65.1%, 27.7%, 7.2%, and 0%, respectively; NHBD-T3 45.7%, 45.7%, 8.6%, and 0%; and DBD 46.5%, 39.4%, 10.2%, and 3.9% (P = .01). The immediate output of the graft also differed in the proportion of primary nonfunction and delayed graft function: NHBD-T2 9.8% and 70.7%, respectively; NHBD-T3 5.0% and 65.0%; and DBD 5.9% and 28.7%.

CONCLUSIONS: The development of an NHBD program allows us to maintain and even increase transplants in our region. The impact on transplant access for O group recipients without priority will depend on the type of NHBD (low proportion of O group in NHBD-T2).

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OBJECTIVES: The aim of this study was to identify new predictors of kidney graft primary dysfunction from results of metabolic, electrolyte composition, and preservation solution effluent osmolality analyses of kidneys from deceased donors.

MATERIALS AND METHODS: Samples of left renal veins in Custodiol preservation solution (produced by Dr. F. Kohler, Chemie, Bensheim, Germany) from kidney explants and from backtable surgical procedures were obtained from 55 deceased donors. We compared metabolic parameters (glucose and lactate levels), electrolyte composition (potassium, sodium, calcium, chloride), and effluent osmolality of kidney samples from donors whose recipients had satisfactory initial graft function (n = 44) and dysfunction (n = 22). Values are shown as median and interquartile ranges between the 25th and 75th percentiles. We used the Mann-Whitney U test to compare quantitative variables.

RESULTS: Statistically significant differences were observed in effluent osmolality results between kidneys that resulted in satisfactory graft function (median, 85; interquartile range, 65.5-97.1) and those that did not result in satisfactory graft function (median, 103.25; interquartile range, 78.7-125.75) (P = .045). We also observed a trend toward significance in sodium ion levels (P = .073) and lactate levels (P = .09). No statistically significant differences were shown in samples obtained from the back table surgical procedure.
CONCLUSIONS: As a predictor of an initially satisfactory functioning deceased-donor kidney graft, it is possible to use the level of osmolality in Custodiol solution effluent obtained at explant.

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BACKGROUND AND AIMS: Compensatory renal hypertrophy following unilateral nephrectomy (UNX) occurs in the remaining kidney. However, the long-term cardiac adaptive process to UNX remains poorly defined in humans. Our goal was to characterize myocardial structure and function in living kidney donors (LKDs), approximately 12 years after UNX.

METHODS AND RESULTS: Cardiac function and structure in 15 Italian LKDs, at least 5 years after UNX (median time from donation = 8.4 years) was investigated and compared to those of age and sex matched U.S. citizens healthy controls (n = 15). Standard and speckle tracking echocardiography (STE) was performed in both LKDs and controls. Plasma angiotensin II,
aldosterone, atrial natriuretic peptide (ANP), N terminus pro B-type natriuretic peptide (NT-proBNP), cyclic guanylyl monophosphate (cGMP), and amino-terminal peptide of procollagen III (PIIINP) were also collected. Median follow-up was 11.9 years. In LKDs, LV geometry and function by STE were similar to controls, wall thickness and volumes were within normal limits also by CMR. In LKDs, CMR was negative for myocardial fibrosis, but apical rotation and LV torsion obtained by STE were impaired as compared to controls (21.4 +/- 7.8 vs 32.7 +/- 8.9 degrees, p = 0.04). Serum creatinine and PIIINP levels were increased [1.1 (0.9-1.3) mg/dL, and 5.8 (5.4-7.6)] mug/L, respectively), while urinary cGMP was reduced [270 (250-355) vs 581 (437-698) pmol/mL] in LKDs. No LKD developed cardiovascular or renal events during follow-up.

CONCLUSIONS: Long-term kidney donors have no apparent structural myocardial abnormalities as assessed by contrast enhanced CMR. However, myocardial deformation of the apical segments, as well as apical rotation, and LV torsion are reduced. The concomitant increase in circulating PIIINP level is suggestive of fibrosis. Further studies, focused on US and EU patients are warranted to evaluate whether these early functional modifications will progress to a more compromised cardiac function and structure at a later time.

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Resilience and quality of life in 161 living kidney donors before nephrectomy and in the aftermath of donation: a naturalistic single center study.

Erim Y; Kahraman Y; Vitinius F; Beckmann M; Kroncke S; Witzke O.

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BACKGROUND: Due to the shortage of cadaveric organs, living kidney donation has begun to serve as the most crucial organ pool. Transplant centers have a legitimate interest in expanding the pool of donors. A psychosocial evaluation is established in transplantation centers to prevent donors from possible emotional harm in the aftermath of donation. We explored if the resilience questionnaire is an appropriate measure of the mental stability. To standardize procedures of psychosocial evaluation and to optimize donor recruitment, we present our evaluation protocol and analyze the causes of exclusion from donation.

METHOD: In a naturalistic design, we compared resilience and quality of life in eligible and excluded donors at the time point of donation. Potential living kidney donors (N = 161)
participated in the obligatory psychosomatic evaluation. Quality of life (World Health Organization Quality of Life, WHOQOL-Bref) and resilience (Resilience Scale, RS-12) were measured. Three months after nephrectomy donors quality of life was screened in a follow-up.

RESULTS: In the evaluation interview donors were classified as eligible (n = 142) or excluded (n = 12). Nonrelated donors (n = 3) were excluded from donation significantly more often (p < .011). Eligible donors (M = 78.42, SD = 10.19) had higher values for resilience than excluded donors (M = 72.7, SD = 8.18, p < .04), who showed values comparable to the norm. In all domains of quality of life, eligible donors had significantly higher values than healthy normals (p < .001). After donation health-related quality of life decreased, but was comparable to the norm. A regression analysis showed that resilience was a significant predictor for all dimensions of quality of life before donation (R(2)= 10.2-24.6 %). Post-donation quality of life was significantly correlated with pre-donation resilience scores (p < .05).

CONCLUSIONS: The resilience score predicts high mental quality of life before and after donation. Therefor it can be implemented as a self-rating instrument to further objectify donor's mental stability. Despite the stressful life event of donation, donor candidates presented high resilience and high levels of quality of life. Therefor our findings support health care providers’ intentions to improve living donation. In the group of excluded donors nonrelated persons were overrepresented. Guidelines for the admission of nonrelated donors are currently unclear and need to be optimized.

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The use of ex-vivo normothermic perfusion for the resuscitation and assessment of human kidneys discarded because of inadequate in situ perfusion.

Hosgood SA; Barlow AD; Dormer J; Nicholson ML.

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[Journal Article. Research Support, Non-U.S. Gov't]

BACKGROUND: Many kidneys are rejected for transplantation due to inadequate in situ perfusion during organ retrieval because of the risk of additional ischaemic injury and microvasculature thrombosis. This study describes the use of ex vivo normothermic perfusion (EVNP) for the resuscitation and assessment of human kidneys that were discarded after inadequate in situ perfusion.

METHODS: Twenty-two human kidneys were retrieved but then deemed unsuitable for transplantation, primarily due to inadequate in situ perfusion. After a period of static cold storage, kidneys were perfused for 60 min with an oxygenated red cell based solution at 36 degreeC.

RESULTS: Nineteen out of 22 kidneys (86 %) were from DCD donors. During EVNP, kidneys were assessed and scored based on their macroscopic appearance, measures of renal blood flow and urine production. Kidneys were scored from 1 indicating the least injury to 5, indicating the worst. Twelve kidneys had an EVNP score of 1-2, 7 scored 3-4 and 3 kidneys scored 5. The EVNP score 5 kidneys had a low level of tubular function compared to the score 1-4 kidneys. Their perfusion parameters did not improve during EVNP and they were considered non-transplantable. There was no association between the histological evaluation and EVNP parameters.
CONCLUSION: EVNP restores function ex vivo and enables an assessment of kidneys that have been declined for transplantation due to inadequate in situ perfusion.

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474.

Relieved or disappointed—experiences of accepted and rejected living kidney donors: a prospective qualitative study.

Agerskov H; Ludvigsen MS; Bistrup C; Pedersen BD.
AIM AND OBJECTIVES: To investigate the perceived experiences and considerations among potential kidney transplantation donors in relation to acceptance or rejection as donors.

BACKGROUND: Kidney transplantations are successfully performed in all Western countries, but the prevalence of patients waiting for organs from deceased donors far exceeds the number of organs available. This shortfall has promoted donation by living donors, who enter the donation process with feelings of hope, concern and patience to be accepted or rejected for donation.

DESIGN: A phenomenological-hermeneutic approach was applied in the study.

METHODS: Semi-structured interviews were conducted with 16 participants. Data were interpreted and discussed in accordance with Ricoeur’s theory of interpretation involving: naive reading, structural analysis, critical interpretation and discussion.

RESULTS: Accepted donors experienced relief and delight. Reflections were made on being prepared for donation and on the risks involved. Relationships between donors and recipients became closer. Rejected donors experienced frustration and disappointment, including anxiety about the recipient’s prospects. Rejected donors reflected on the reason for rejection, and this could include considerations about changes to their own lifestyle. Reactions from relatives had an impact on donors.

CONCLUSIONS: The study concluded that both the accepted and rejected donors were vulnerable and in need of attention, engagement, support and care. The study draws attention to the need for healthcare professionals to be open and sensitive to the donors’ descriptions of their unique experiences of being accepted or rejected for kidney donation.

RELEVANCE TO CLINICAL PRACTICE: Nurses should be aware that dialogue with donors, including reflections on experiences, is important to reduce and alleviate vulnerability and to give the best possible support and attention, including the opportunity to promote optimal postdonation outcomes.

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Emotional and Financial Experiences of Kidney Donors over the Past 50 Years: The RELIVE Study.

Jacobs CL; Gross CR; Messersmith EE; Hong BA; Gillespie BW; Hill-Callahan P; Taler SJ; Jowsey SG; Beebe TJ; Matas AJ; Odim J; Ibrahim HN; RELIVE Study Group.

BACKGROUND AND OBJECTIVES: Most kidney donors view their experience positively, but some may experience psychosocial and financial burdens. We hypothesized that certain donor characteristics, poor outcome of the recipient, negative perceptions of care, and lack of support may be associated with poor psychosocial outcomes for donors.

DESIGN, SETTING, PARTICIPANTS, & MEASUREMENTS: The Renal and Lung Living Donors Evaluation Study (RELIVE) examined long-term medical and psychosocial outcomes for kidney donors (at three U.S. transplant centers) who donated between 1963 and 2005. Standardized questionnaires evaluated donor perspectives, recovery time, social support, motivation, financial impact, insurability after donation, and current psychological status. Questionnaires were mailed to 6909 donors.
RESULTS: Questionnaires were returned by 2455 donors, who had donated 17 +/- 10 years earlier (range, 5-48 years), a response rate of 36%. Most (95%) rated their overall donation experience as good to excellent. Rating the overall donor experience more negatively was associated with donor complications, psychological difficulties, recipient graft failure, and longer time since donation. Nine percent (n=231) reported one or more of the following poor psychosocial outcomes: fair or poor overall donor experience, financial burden, regret or discomfort with decision to donate, or psychological difficulties since donation. Recipient graft failure was the only predictor for reporting one or more of these poor psychosocial outcomes (odds ratio, 1.77; 95% confidence interval, 1.33 to 2.34). Donors with lower educational attainment experienced greater financial burden. One of five employed donors took unpaid leave; 2% reported health and life insurability concerns.

CONCLUSIONS: Although the majority of donors viewed their overall donation experience positively, almost 1 in 10 donors reported at least one negative consequence related to donation. Recipient graft failure was associated with poor psychosocial outcome, defined as one or more of these negative consequences. Some donors were financially disadvantaged, and some experienced insurance difficulties. Interventions to avoid negative psychosocial and financial consequences are warranted.

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Robot-Assisted Laparoscopic Donor Nephrectomy vs Standard Laparoscopic Donor Nephrectomy: A Prospective Randomized Comparative Study.

Bhattu AS; Ganpule A; Sabnis RB; Murali V; Mishra S; Desai M.

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[Comparative Study. Journal Article. Randomized Controlled Trial]

UI: 26414847

OBJECTIVE: The goal of this randomized controlled trial was to compare the outcomes of robot-assisted laparoscopic donor nephrectomy (RDN) with standard laparoscopic donor nephrectomy (LDN).

MATERIALS AND METHODS: Forty-five voluntary kidney donors (27 for right subgroup and 18 for left subgroup) who met inclusion and exclusion criteria were randomized into 2 groups, RDN
and LDN in 1:2 ratio. Primary endpoints were visual analogue scale (VAS) pain scores, analgesic requirement, and hospital stay of donors. Secondary endpoints were donor's intraoperative and postoperative parameters, graft outcomes, and donor surgeon's difficulty scores.

RESULTS: All procedures were completed without any intraoperative complications. VAS pain scores at 6, 24, and 48 hours (p=0.00), analgesic requirement (p=0.00), and hospital stay (p=0.00) were less in RDN than in LDN. Longer graft arterial length could be preserved with robotic approach on right side (p=0.03) but not on left side (p=0.77). The RDN group required more number of ports (p=0.00), longer retrieval time (p=0.00), and warm ischemia time (WIT) (p=0.01). Total operative time (p=0.14), hemoglobin drop (p=0.97), postoperative donor complications (p=0.97), and the recipient estimated glomerular filtration rate at 9 months (p=0.64) were similar in both groups. Difficulty scores of console surgeon were less in most steps on right side but not on left side. Patient-side surgeon in RDN had higher difficulty scores for retrieval.

CONCLUSION: RDN is safe and is associated with better morbidity profile than LDN. Robotic approach provides technical ease and facilitates preservation of longer length of renal artery on right side. Left RDN is associated with longer WIT; however, this does not translate into poor graft outcome.
A better understanding of the course and risk factors for impaired long-term health-related quality of life (HRQoL; ie, physical, psychological, and social-relational functioning) after kidney donation might help clinicians improve the care of live kidney donors. This systematic review and meta-analysis summarizes prospective studies about the course and predictors of HRQoL in living kidney donors. Studies indicate that shortly after donation, donors have lower HRQoL, with minor to moderate changes in psychological and social-relational functioning and major changes in physical functioning. At 3-12 months after donation, HRQoL returned to baseline or was slightly reduced, particularly for fatigue, but scores were still comparable to general population norms. Results were mainly robust across surgery techniques. A limited number of studies examined risk factors for impaired HRQoL, with low psychological functioning before donation as the most consistent predictor. Based on these results, clinicians can inform potential donors that, on average, kidney donors have high long-term HRQoL; however, donors with low psychological functioning at baseline are those most at risk of impaired long-term HRQoL. Future studies should focus on other potentially relevant predictors of postdonation HRQoL, including donor eligibility criteria and donor-recipient relationships, to optimize screening and interventions for donors at risk.

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Differential Expression of Specific Dermatan Sulfate Domains in Renal Pathology.
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Dermatan sulfate (DS), also known as chondroitin sulfate (CS)-B, is a member of the linear polysaccharides called glycosaminoglycans (GAGs). The expression of CS/DS and DS proteoglycans is increased in several fibrotic renal diseases, including interstitial fibrosis, diabetic
nephropathy, mesangial sclerosis and nephrosclerosis. Little, however, is known about structural alterations in DS in renal diseases. The aim of this study was to evaluate the renal expression of two different DS domains in renal transplant rejection and glomerular pathologies. DS expression was evaluated in normal renal tissue and in kidney biopsies obtained from patients with acute interstitial or vascular renal allograft rejection, patients with interstitial fibrosis and tubular atrophy (IF/TA), and from patients with focal segmental glomerulosclerosis (FSGS), membranous glomerulopathy (MGP) or systemic lupus erythematosus (SLE), using our unique specific anti-DX antibodies LKN1 and GD3A12. Expression of the 4/2,4-di-O-sulfated DS domain recognized by antibody LKN1 was decreased in the interstitium of transplant kidneys with IF/TA, which was accompanied by an increased expression of type I collagen, decorin and transforming growth factor beta (TGF-beta), while its expression was increased in the interstitium in FSGS, MGP and SLE. Importantly, all patients showed glomerular LKN1 staining in contrast to the controls. Expression of the IdoA-Gal-Nac4SDS domain recognized by GD3A12 was similar in controls and patients. Our data suggest a role for the DS domain recognized by antibody LKN1 in renal diseases with early fibrosis. Further research is required to delineate the exact role of different DS domains in renal fibrosis.

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Comparison of Postoperative Analgesic Requirements in Living Donors and Patients Undergoing Similar Surgical Procedures.
Wang J; Fu Y; Yuan T; Wang N.
UI: 26293069

BACKGROUND: More factors affect pain perception of donors than patients. We prospectively evaluated postoperative pain intensity and analgesic requirements in living kidney donors and patients with renal cell carcinoma undergoing laparoscopic nephrectomy with similar surgical procedures.

MATERIAL AND METHODS: The study included 30 living kidney donors and 30 patients with renal cell carcinoma undergoing laparoscopic nephrectomy from March 2013 to August 2014. All of the participants underwent similar surgical procedures under general anesthesia. Data including participants' demographics, surgical data, postoperative analgesic requirements, visual analog scale scores at rest and during coughing at postoperative 0.5, 2, 4, 8, 12, 24, and 48 hours, side effects, and overall satisfaction degree were compared between the 2 groups.

RESULTS: Time to the first tramadol request was significantly shorter in the donors. The donors received more intravenous doses of tramadol than the patients. Visual analog scale scores at 2 and 4 hours at rest and at 2, 4, and 8 hours during coughing after extubation were significantly higher in the donors. There were no significant differences between the groups according to the
number of participants given pethidine, time to pethidine rescue, and adverse effects. The overall satisfaction degree was comparable between the 2 groups.

CONCLUSIONS: There were significant differences with respect to postoperative pain intensity and analgesic requirements in living kidney donors and patients undergoing retroperitoneal laparoscopic nephrectomy with similar surgical procedures.

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Comparison of the effectiveness of low pressure pneumoperitoneum with profound muscle relaxation during laparoscopic donor nephrectomy to optimize the quality of recovery during the early post-operative phase: study protocol for a randomized controlled clinical trial.
Ozdemir-van Brunschot DM; Scheffer GJ; Dahan A; Mulder JE; Willems SA; Hilbrands LB; d'Ancona FC; Donders RA; van Laarhoven KJ; Warle MC.
[Clinical Trial, Phase IV. Journal Article. Randomized Controlled Trial. Research Support, Non-U.S. Gov't]
UI: 26265279
BACKGROUND: Since technique modifications of laparoscopic donor nephrectomy, e.g. retroperitoneoscopic donor nephrectomy or hand-assistance, have not shown significant benefit regarding safety or improvement of recovery, further research should focus on improving postoperative recovery. The use of low pressure pneumoperitoneum has shown to significantly reduce postoperative pain after laparoscopy. To facilitate the use of low pressure pneumoperitoneum, deep neuromuscular block will be used.

METHODS/DESIGN: This trial is a phase IV, single center, double-blind, randomized controlled clinical trial in which 64 patients will be randomized to: low pressure pneumoperitoneum (6 mmHg) and deep neuromuscular block or normal pressure pneumoperitoneum (12 mmHg) and deep neuromuscular block. Deep neuromuscular block is defined as post tetanic count < 5. Primary outcome measurement will be Quality of Recovery-40 questionnaire (overall score) on day 1.

DISCUSSION: This study is the first randomized study to assess the combination of low pressure pneumoperitoneum in combination with deep neuromuscular block from a patients' perspective. The study findings may also be applicable for other laparoscopic procedures.

TRIAL REGISTRATION: The trial was registered at trials.gov (NCT02146417) in July 2014.

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Kidney transplantation is the key for patients with end-stage renal disease, improving quality of life and longer survival. However, kidney transplant triggers an intense inflammatory response and alters the hemostatic system, but the pathophysiological mechanisms of these changes are not completely understood. The aim of this cross-sectional cohort study was to investigate hemostatic biomarkers in Brazilian renal transplanted patients according to renal function and time after transplantation. A total of 159 renal transplanted patients were enrolled and D-Dimer (D-Di), Thrombomodulin (TM), von Willebrand Factor (VWF), and ADAMTS13 plasma levels were
assessed by ELISA. An increase of D-Di was observed in patients with higher levels of creatinine. ADAMTS13 levels were associated with creatinine plasma levels and D-Di levels with Glomerular Filtration Rate. These results suggested that D-Di and ADAMTS13 can be promising markers to estimate renal function. ADAMTS13 should be investigated throughout the posttransplant time to clarify the participation of this enzyme in glomerular filtration and acceptance or rejection of the graft in Brazilian transplanted patients.

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Gender differences in use of prescription narcotic medications among living kidney donors.
Prescription narcotic use among living kidney donors is not well described. Using a unique database that integrates national registry identifiers for living kidney donors (1987-2007) in the United States with billing claims from a private health insurer (2000-2007), we identified pharmacy fills for prescription narcotic medications in periods 1-4 and >4 yr post-donation and estimated relative likelihoods of post-donation narcotic use by Cox regression. We also compared narcotic fill rates and medication possession ratios (MPRs, defined as (days of medication supplied)/(days observed)), between donors and age- and sex-matched non-donors. Overall, rates of narcotic medication fills were 32.3 and 32.4 per 100 person-years in periods 1-4 and >4 yr post-donation. After age and race adjustment, women were approximately twice as likely as men to fill a narcotic prescription in years 1-4 (adjusted hazard ratio, aHR, 2.28; 95% confidence interval, CI, 1.86-2.79) and >4 yr (aHR 1.70; 95% CI 1.50-1.93). MPRs in donors were low (<2.5% days exposed), and lower than among age- and sex-matched non-donors. Prescription narcotic medication use is more common among women than men in the intermediate term after live kidney donation. Overall, total narcotic exposure is low, and lower than among non-donors from the general population.

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Ultrasound/Laparoscopic Camera-Guided Transversus Abdominis Plane Block for Renal Transplant Donors: A Randomized Controlled Trial.
Guner Can M; Goz R; Berber I; Kaspar C; Cakir U.

BACKGROUND: The most common treatment modality for postoperative pain relief following laparoscopic surgery is multimodal, using nonsteroidal antiinflammatory drugs (NSAID), opioids,
and infiltration of local anesthetics. Because NSAIDs are nephrotoxic, local infiltration does not relieve deep tissue pain, and opioids have an adverse effects profile including pruritus, nausea, vomiting, oversedation, apnea, and decreased gastrointestinal motility. Therefore, the use of a regional analgesic technique can lead to an improved quality of recovery. The aim of this prospective, randomized, placebo-controlled study was to evaluate the effect of TAP block on postoperative verbal analog scale (VAS) scores and total morphine requirements in the first 24 hours after laparoscopic live donor nephrectomy.

MATERIAL AND METHODS: After obtaining approval from the hospital ethics committee and written informed consent from the patients, 49 ASA I-II patients undergoing laparoscopic donor nephrectomy, aged 18 years or over, were included in this prospective, randomized, controlled study. In this clinical trial patients were divided into 2 groups: TAP block group (group T) and placebo group (group P). The demographic variables, pain scores, morphine consumption, level of sedation, presence of postoperative nausea, vomiting, pruritus, and average length of postoperative stay were reviewed.

RESULTS: The pain scores were significantly lower after TAP block with bupivacaine at most but not all time points. Patients receiving the TAP block with bupivacaine required less morphine up to 24 hours after surgery compared with the saline group.

CONCLUSIONS: USG-guided TAP block as part of a balanced analgesia regimen is of benefit in reducing postoperative pain and morphine consumption after laparoscopic donor nephrectomy.

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A 4-year follow-up of living unrelated donors of kidney allograft in Iran.
Nobakht Haghighi A; Malakoutian T; Radfar M; Abdi E; Kamgar M; Broumand B; Fazel I.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Research Support, Non-U.S. Gov't]
UI: 26174453

INTRODUCTION: Shortage of deceased donor kidneys has resulted in an increased rate of kidney transplantation from living unrelated donors (LURDs). However, there are concerns about short-term and long-term morbidity of the donors. This study reports the clinical and biochemical factors in a follow-up program of Iranian LURDs, one of the largest reported series of kidney donors.

MATERIALS AND METHODS: Of 7500 individuals who underwent living donor nephrectomies between 2005 and 2008, a total of 1549 participated in this study. They were followed for 18 to 48 months after the kidney donation. The average time for the first study visit was 316.72 days after donation.

RESULTS: The mean age of donors was 30.43 +/- 6.16 years old. Men consisted 82.5% of the group. Systolic hypertension was detected in 0.2% and diastolic hypertension in 1% of the LURDs; however, anemia prevalence was as high as 47.2%. Hyperuricemia was found in 21.2% of the LURDs, while proteinuria was seen in 13.7%. Glomerular filtration rate was greater than 90 mL/min in 38.2% of the donors, 60 mL/min to 90 mL/min in 54.5%, and less than 60 mL/min in 7.3%. A GFR less than 45 mL/min was seen in 0.1% of the donors.

CONCLUSIONS: Data suggested that the LURDs in Iran have an appropriate health condition comparable to other donors in other parts of the world. Considering the high prevalence of hyperuricemia in our population and its importance as a risk factor for kidney failure, monitoring serum uric acid in follow-up programs is suggested.
Assessment of Hemostasis after Plasma Exchange Using Rotational Thrombelastometry (ROTEM).

Tholking G; Mesters R; Dittrich R; Pavenstadt H; Kumpers P; Reuter S.

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present


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UI: 26121484

BACKGROUND: Therapeutic plasma exchange (TPE)-based protocols immediately before cadaveric donor kidney transplantation have been extensively used in highly sensitized recipients. Plasma is generally preferred over human albumin as replacement fluid to avoid depletion of coagulation factors and perioperative bleeding. The aim of this study was to estimate bleeding risk after TPE replaced with albumin using rotational thromboelastography (ROTEM).

METHODOLOGY: Ten patients without overt coagulation abnormalities underwent TPE. Standard laboratory coagulation tests (thromboplastin time, activated partial thromboplastin time [aPTT], international normalized ratio [INR], thrombin clotting time, fibrinogen levels and antithrombin activity) were compared with thrombelastometry analysis (EXTEM and INTEM tests) before and after TPE.

PRINCIPAL FINDINGS: TPE significantly reduced fibrinogen levels (482 +/- 182 vs. 223 +/- 122 mg/dL), antithrombin activity (103 +/- 11 vs. 54 +/- 11 %), and prolonged aPTT (28 +/- 3 vs. 45 +/- 8 s), thromboplastin time (108 +/- 11 vs. 68 +/- 11 %), INR (0.95 +/- 0.06 vs. 1.25 +/- 0.16), and thrombin clotting time (18 +/- 2 vs. 20 +/- 3 s). INTEM and EXTEM analyses revealed significantly prolonged clot-formation time and reduced maximum clot firmness.

CONCLUSIONS/SIGNIFICANCE: TPE replaced with albumin induces significant changes in global hemostasis parameters thus potentially increasing bleeding risk. Therefore, pretransplant
TPE should be considered carefully in indicated patients before kidney transplantation. The role of the ROTEM point-of-care test to estimate the risk of bleeding in renal transplantation needs to be evaluated in further studies.

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486.
OBJECTIVES: We assessed the safety and efficacy of right versus left laparoscopic living-donor nephrectomy. Few clinical controlled studies have compared the right and left side, and most trials have a small sample number and varied results. A meta-analysis of published trials was performed to determine the effects of the 2 different approaches.

MATERIALS AND METHODS: Major databases including Medline (PubMed), Embase, Ovid, and Cochrane were searched to identify studies comparing right and left laparoscopic living-donor nephrectomy (January 2000 to January 2014). Outcomes evaluated included operative time, warm ischemia time, operative blood loss, 1-year graft loss, donor intraoperative and postoperative complications, recipient postoperative complications, donor blood transfusion, conversion to open donor nephrectomy, length of donor hospital stay, and delayed graft function.

RESULTS: There were 15 studies included with 3073 patients (left, 2420 patients [78%]; right, 653 patients [22%]). The right group had shorter operative time (weighted mean difference, -13.44 min; 95% confidence interval, -22.73 to -4.15 min; P = .005) and lower operative blood loss (weighted mean difference, -10.53 mL; 95% confidence interval, -17.43 to -3.64 mL; P = .003) than the left group. There was a higher rate of overall donor intraoperative complications in the left group (odds ratio, 0.53; 95% confidence interval, 0.31-0.92; P = .03). There were no differences between groups in hospital stay, delayed graft function, recipient 1-year graft loss, conversion to open donor nephrectomy, donor blood transfusion, and donor or recipient postoperative complications.

CONCLUSIONS: Right and left laparoscopic living-donor nephrectomy were similar in the effect of surgery and postoperative graft function. When there are no differences in bilateral renal function, surgeons can transplant the right or left kidney. However, the longer renal vein of the left kidney could decrease operative difficulty, and we recommend using the left kidney in clinical practice.
Minimally invasive renal autotransplantation. [Review]
Sood A; Jeong W; Ahlawat R; Abdollah F; Sammon JD; Bhandari M; Menon M.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article. Review]
UI: 25995142

Minimally invasive renal allotransplantation techniques have been recently described; reported benefits include reduced morbidity/complications. These benefits have been successfully adapted for minimally invasive renal autotransplantation, however, in a non-oncological setting. We, here, describe a novel alternative robot-assisted renal autotransplantation technique, utilizing GelPOINT, which by permitting ex vivo graft examination and surgery might allow further broadening of indications for minimally-invasive renal autotransplantation, to include complex oncological renal/ureteral lesions. Future studies are needed to evaluate the utility of these techniques.

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Variant anatomy may be challenging at retrieval, with failure to identify variance being associated with organ damage, particularly vascular damage. On implantation, some variants demand nonstandard techniques of reconstruction or implantation. This review covers the common and less common anatomical variants of the liver, kidney and pancreas, and gives guidance as to how they may be managed during organ retrieval and implantation.

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Living kidney donation benefits recipients and society but carries short-term and long-term risks for the donor. This Review summarizes the studies that underlie our current understanding of these risks in the first decade after donation, with a view to improving the informed consent process. Two studies report a higher risk of end-stage renal disease (ESRD) among donors than among healthy nondonors; however, the absolute 15-year incidence of ESRD is <1%. All-cause mortality and the risk of cardiovascular events are similar among donors and healthy nondonors, although one study provides evidence for a 5% increase in all-cause mortality after 25 years that is attributable to donation. Some evidence suggests that the 20-year incidence of gout is slightly higher among donors than among healthy nondonors. The risks of gestational hypertension or pre-eclampsia seem to be 6% higher in pregnancies among donors than in pregnancies among healthy nondonors. The incidences of acute kidney injury, kidney stones that require surgical intervention, gastrointestinal bleeding and fractures seem no higher among donors than among healthy nondonors, although some of these conclusions are based on a small number of events. Future studies must clarify the lifetime incidence of long-term outcomes, particularly in relation to a donor's age, race, and history of comorbidities.
490.
Living kidney donation does not adversely affect serum calcification propensity and markers of vascular stiffness.
de Seigneux S; Ponte B; Berchtold L; Hadaya K; Martin PY; Pasch A.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
Transplant International. 28(9):1074-80, 2015 Sep.
[Journal Article. Research Support, Non-U.S. Gov't]
UI: 25903063
Living kidney donors (LKD) experience a decline in glomerular filtration rate (GFR) after donation. Calcification propensity (T50) can be determined by a blood test predicting all-cause mortality in patients with chronic kidney disease. We studied the impact of kidney donation on T50 and markers of arterial stiffness. We analyzed T50 prospectively before and 1 year after kidney donation in 21 LKD along with fetuin-A, mineral metabolism markers, kidney length, pulse wave velocity (PWV), augmentation index (AI), and renal resistive index (RRI) as markers of
arterial stiffness. We studied the impact of kidney donation on these parameters. LKDs were 54 +/- 10 years old and had a GFR of 101 +/- 18 ml/min/1.73 m(2) before donation, decreasing to 67 +/- 8 ml/min/1.73 m(2) after donation (P < 0.001). Despite this, T50 improved after donation (290 +/- 53 to 312 +/- 38 min, P = 0.049). This change was inversely related to plasma phosphate (P = 0.03), which declined after donation (P = 0.002). Fetuin-A levels increased after donation (P = 0.01). Upon donation, the length of the remaining kidney increased (P < 0.001) while PWV, AI, and RRI remained unchanged. Calcification propensity was not adversely affected by kidney donation. This indicates that T50 is independent from GFR in LKDs and that kidney donation does neither worsen calcification propensity nor markers of vascular stiffness at 1 year.

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491.
Gout after living kidney donation: correlations with demographic traits and renal complications.
Lam NN; Garg AX; Segev DL; Schnitzler MA; Xiao H; Axelrod D; Brennan DC; Kasiske BL; Tuttle-Newhall JE; Lentine KL.
BACKGROUND: The demographic and clinical correlates of gout after living kidney donation are not well described.

METHODS: Using a unique database that integrates national registry identifiers of U.S. living kidney donors (1987-2007) with billing claims from a private health insurer (2000-2007), we identified post-donation gout based on medical diagnosis codes or pharmacy fills for gout therapies. The frequencies and demographic correlates of gout after donation were estimated by Cox regression with left- and right-censoring. We also compared the rates of renal diagnoses among donors with and without gout, matched in the ratio 1:3 by age, sex, and race.

RESULTS: The study sample of 4,650 donors included 13.1% African Americans. By seven years, African Americans were almost twice as likely to develop gout as Caucasian donors (4.4 vs. 2.4%; adjusted hazard ratio, aHR, 1.8; 95% confidence interval (CI) 1.0-3.2). Post-donation gout risk also increased with older age at donation (aHR per year 1.05) and was higher in men (aHR 2.80). Gout rates were similar in donors and age- and sex-matched general non-donors (rate ratio 0.86; 95% CI 0.66-1.13). Compared to matched donors without gout, donors with gout had more frequent renal diagnoses, reaching significance for acute kidney failure (rate ratio 12.5; 95% CI 1.5-107.0), chronic kidney disease (rate ratio 5.0; 95% CI 2.1-11.7), and other disorders of the kidney (rate ratio 2.2; 95% CI 1.2-4.2).

CONCLUSION: Donor subgroups at increased risk of gout include African Americans, older donors, and men. Donors with gout have a higher burden of renal complications after demographic adjustment.

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Affiliation ID
Source: NLM. NIHMS669763
A comparison of technique modifications in laparoscopic donor nephrectomy: a systematic review and meta-analysis. [Review]
Ozdemir-van Brunschot DM; Koning GG; van Laarhoven KC; Ergun M; van Horne SB; Rovers MM; Warle MC.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
UI: 25816148
OBJECTIVE: To compare the effectiveness of different technique modifications in laparoscopic donor nephrectomy.
DESIGN: Systematic review and meta-analyses.
DATA SOURCES: Searches of PubMed, EMBASE, Web of Science and Central from January 1st 1997 until April 1st 2014.
STUDY DESIGN: All cohort studies and randomized clinical trials comparing fully laparoscopic donor nephrectomy with modifications of the standard technique including hand-assisted, retroperitoneoscopic and single port techniques, were included.
DATA-EXTRACTION AND ANALYSIS: The primary outcome measure was the number of complications. Secondary outcome measures included: conversion to open surgery, first warm ischemia time, estimated blood loss, graft function, operation time and length of hospital stay.
Each technique modification was compared with standard laparoscopic donor nephrectomy. Data was pooled with a random effects meta-analysis using odds ratios, weighted mean differences and their corresponding 95% confidence intervals. To assess heterogeneity, the I² statistic was used. First, randomized clinical trials and cohort studies were analyzed separately, when data was comparable, pooled analysis were performed.
RESULTS: 31 studies comparing laparoscopic donor nephrectomy with other technique modifications were identified, including 5 randomized clinical trials and 26 cohort studies. Since
data of randomized clinical trials and cohort studies were comparable, these data were pooled. There were significantly less complications in the retroperitoneoscopic group as compared to transperitoneal group (OR 0.52, 95%CI 0.33-0.83, I2 = 0%). Hand-assisted techniques showed shorter first warm ischemia and operation times.

CONCLUSIONS: Hand-assistance reduces the operation and first warm ischemia times and may improve safety for surgeons with less experience in laparoscopic donor nephrectomy. The retroperitoneoscopic approach was significantly associated with less complications. However, given the, in general, poor to intermediate quality and considerable heterogeneity in the included studies, further high-quality studies are required.

TRIAL REGISTRATION: The review protocol was registered in the PROSPERO database before the start of the review process (CRD number 42013006565).

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2015
Endovascular Repair of Abdominal Aortic Aneurysms in the Presence of a Transplanted Kidney.
Silverberg D; Yalon T; Halak M.
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[Journal Article]
UI: 25472937
PURPOSE: To present our experience performing endovascular repair of abdominal aortic aneurysms in kidney transplanted patients.
METHODS: A retrospective review of all patients who underwent endovascular aneurysm repair (EVAR) for abdominal aortic aneurysms (AAA) performed at our institution from 2007 to 2014. We identified all patients who had previously undergone a kidney transplant. Data collected included: comorbidities, preoperative imaging modalities, indication for surgery, stent graft configurations, pre- and postoperative renal function, perioperative complications, and survival rates.
RESULTS: A total of 267 EVARs were performed. Six (2%) had a transplanted kidney. Mean age was 74 (range, 64-82) years; five were males. Mean time from transplantation to EVAR was 7.5 (range, 2-12) years. Five underwent preoperative planning with noncontrast modalities only. Devices used included bifurcated (n = 3), aortouniiliac (n = 2), and tube (n = 1) stent grafts. Technical success was achieved in all patients. None experienced deterioration in renal function. Median follow-up was 39 (range, 6-51) months. Four patients were alive at the time of the study. Two patients expired during the period of follow-up from unrelated causes.
CONCLUSIONS: EVAR is an effective modality for the management of AAAs in the coexistence of a transplanted kidney. It can be performed with minimal morbidity and mortality without harming the transplanted kidney. Special consideration should be given to device configuration to minimize damage to the renal graft.

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494.
A Rarely Used Surgical Technique of Adult En Bloc Renal Transplant.
Harishankar RN; Madhu E Sr; Santosh OA.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid
MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 25077482
OBJECTIVES: We report the first en bloc adult deceased-donor renal transplant at our center. We had a an extended criteria, female, deceased donor, who was a known hypertensive, hypothyroid, with a history of Hodgkin lymphoma that had been treated successfully 30 years prior without recurrence. Her cause of death was intracranial hemorrhage. In view of the raised creatinine level at the time of donation, the transplant team decided to accept the kidneys for dual transplant. We decided to use a technique that is used to recover pediatric en bloc kidneys in our adult deceased donor.
MATERIALS AND METHODS: The kidneys were recovered en bloc with the aorta and inferior vena cava. Meticulous back table work was required in ligating all the nonrenal tributaries of the donor aorta and inferior vena cava. We anastomosed the aorta to the common iliac artery in an oblique end-to-side fashion. The donor inferior vena cava was anastomosed to the external iliac vein in an end-to-side fashion. The distal ends of ureters were made into a common lumen with a side-to-side anastomosis, and this common ureter was implanted into the bladder.
RESULTS: There was no requirement for postoperative dialysis. The creatinine is at nadir of 88 mumol/L at 1 year of follow up.
CONCLUSIONS: This is a method that can be attempted for implanting dual kidneys on one side. Kidneys with multiple vessels can be transplanted like a single kidney with a shorter cold ischemia/overall operative time and less fatigue for the surgeon.
Status
495.
Outcomes of Percutaneous Management of Anastomotic Ureteral Strictures in Renal Transplantation: Chronic Nephroureteral Stent Placement with and without Balloon Dilatation.
Uflacker A; Sheeran D; Khaja M; Patrie J; Elias G; Saad W.
OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[Journal Article]
UI: 25047414
PURPOSE: This study was designed to evaluate outcomes of percutaneous management of anastomotic ureteral strictures in renal transplants using nephroureteral stents with or without balloon dilatation.
METHODS: A retrospective audit of 1,029 consecutive renal transplants was performed. Anastomotic ureteral strictures were divided into two groups: nephroureteral stent only (NUS) and NUS+PTA (nephroureteral stent plus percutaneous transluminal angioplasty), with each cohort subdivided into early versus late presentation (obstructive uropathy occurring <90 day or >90 days from transplant, respectively). Overall and 6-month technical success were defined as removal of NUS any time with <30 % residual stenosis (any time lapse less or more than 6 months) and at >6 months, respectively. Patency was evaluated from NUS removal to last follow-up for both groups and compared.
RESULTS: Sixty-seven transplant patients with 70 ureteric anastomotic strictures (6.8 %, n = 70/1,029) underwent 72 percutaneous treatments. 34 % were late (>90 days, n = 24/70), and 66
% were early (<90 days, n = 46/70). Overall technical success was 82 % (n = 59/72) and 6-month success was 58 % (n = 42/72). Major and minor complications were 2.8 % (n = 2/72), and 12.5 % (n = 9/72). NUS+PTA did not improve graft survival (p = 0.354) or patency (p = 0.9) compared with NUS alone. There was no difference in graft survival between treated and nontreated groups (p = 0.74).

CONCLUSIONS: There is no advantage to PTA in addition to placement of NUS, although PTA did not negatively impact graft survival or long-term patency and both interventions were safe and effective. Neither the late or early groups benefited from PTA in addition to NUS. Earlier obstructions showed greater improvement in serum creatinine than later obstructions.

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20150507
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496.
Percutaneous coronary interventions and antiplatelet therapy in renal transplant recipients.
Summaria F., Giannico M.B., Talarico G.P., Patrizi R.
Embase
Therapeutic Advances in Cardiovascular Disease. 10 (2) (pp 86-97), 2015. Date of Publication:
2015.
[Review]
AN: 609879884
Cardiovascular disease is the leading cause of mortality and morbidity following renal transplantation (RT), accounting for 40-50% of all deaths. After renal transplantation, an adverse cardiovascular event occurs in nearly 40% of patients; given the dialysis vintage and the average wait time, the likelihood of receiving coronary revascularization is very high. There is a significant
gap in the literature in terms of the outcomes of prophylactic coronary revascularization in renal transplantation candidates. Current guidelines on myocardial revascularization stipulate that renal transplant patients with significant coronary artery disease (CAD) should not be excluded from the potential benefit of revascularization. Compared with percutaneous coronary intervention (PCI), however, coronary artery bypass grafting is associated with higher early and 30-day mortality. About one-third of renal transplant patients with CAD have to be treated invasively and so PCI is currently the most popular mode of revascularization in these fragile and compromised patients. A newer generation drug-eluting stent (DES) should be preferred over a bare metal stent (BMS) because of its lower risk of restenosis and improved safety concerns (stent thrombosis) compared with first generation DES and BMS. Among DES, despite no significant differences being reported in terms of efficacy, the newer everolimus and zotarolimus eluting stents should be preferred given the possibility of discontinuing, if necessary, dual antiplatelet therapy before 12 months. Since there is a lack of randomized controlled trials, the current guidelines are inadequate to provide a specifically tailored antiplatelet therapeutic approach for renal transplant patients. At present, clopidogrel is the most used agent, confirming its central role in the therapeutic management of renal transplant patients undergoing PCI. While progress in malignancy-related mortality seems a more distant target, a slow but steady reduction in cardiovascular deaths, improving pharmacological and interventional therapy, is nowadays an achievable medium-term target in renal transplant patients.

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Enhancing kidney function with thrombolytic therapy following donation after cardiac death: A multicenter quasi-blinded prospective randomized trial.

Clinical Transplantation. 29 (12) (pp 1173-1180), 2015. Date of Publication: 01 Dec 2015.

Kidneys from donors after cardiac death (DCD) are at risk for inferior outcomes, possibly due to microthrombi and additional warm ischemia. We describe an organ procurement organization-wide trial utilizing thrombolytic tissue plasminogen activator (tPA) during machine pulsatile perfusion (MPP). A kidney from each recovered kidney pair was prospectively randomized to receive tPA (50 mg Alteplase) or no tPA (control) in the MPP perfusate. From 2011 to 2013, 24 kidneys were placed with enrolled recipients from 19 DCD kidney donors. There were no significant differences for absolute values of flow or resistance while undergoing MPP between the groups, nor rates of achieving discrete flow and resistance targets. While there was a trend toward lower creatinine and higher glomerular filtration rates in the tPA group at 3, 6, 9, and 12 months, these differences were not significant. Delayed graft function (DGF) rates were 41.7% in the tPA group vs. 58.4% in the control group (OR 0.51, 95%CI 0.10-2.59, p = 0.68). Death-censored graft survival was similar between the groups. In this pilot study, encouraging trends are seen in kidney allograft function independent of MPP parameters following DCD kidney transplantation for those kidneys receiving thrombolytic tPA and MPP, compared with standard MPP. Copyright © 2015 John Wiley & Sons A/S.

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Kidney aging is associated with an increasing proportion of globally scarred glomeruli, decreasing renal function, and exponentially increasing ESRD prevalence. In model systems, podocyte depletion causes glomerulosclerosis, suggesting age-associated glomerulosclerosis could be caused by a similar mechanism. We measured podocyte number, size, density, and glomerular volume in 89 normal kidney samples from living and deceased kidney donors and normal poles of nephrectomies. Podocyte nuclear density decreased with age due to a combination of decreased podocyte number per glomerulus and increased glomerular volume. Compensatory podocyte cell hypertrophy prevented a change in the proportion of tuft volume occupied by podocytes. Young kidneys had high podocyte reserve (podocyte density >300 per 106 mum3), but by 70-80 years of age, average podocyte nuclear density decreased to <100 per 106 mum3, with corresponding podocyte hypertrophy. In older age podocyte detachment rate (urine podocinmRNA-to-creatinine ratio) was higher than at younger ages and podocytes were stressed (increased urine podocin-to-nephrin mRNA ratio). Moreover, in older kidneys, proteinaceous material accumulated in the Bowman space of glomeruli with low podocyte density. In a subset of these glomeruli, mass podocyte detachment events occurred in association with podocytes becoming binucleate (mitotic podocyte catastrophe) and subsequent wrinkling of glomerular capillaries, tuft collapse, and periglomerular fibrosis. In kidneys of young patients with underlying glomerular diseases similar pathologic events were identified in association with focal global glomerulosclerosis. Podocyte density reduction with age may therefore directly lead to focal global glomerulosclerosis, and all
progressive glomerular diseases can be considered superimposed accelerators of this underlying process. Copyright © 2015 by the American Society of Nephrology.

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20160303

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499.
Chronic hyperglycemia is associated with acute kidney injury in patients undergoing CABG surgery--a cohort study.

Embase

[Article]
AN: 615663460

BACKGROUND: Chronic hyperglycemia (CHG) with HbA1c as an indicator affects postoperative mortality and morbidity after coronary artery bypass grafting surgery (CABG). Acute kidney injury (AKI) is one of the frequent postoperative complications after CABG impacting short-and long-term outcomes. We investigated the association between CHG and postoperative incidence of
AKI in CABG patients with and without history of diabetes mellitus (DM). METHODS: This cohort study consecutively enrolled patients undergoing CABG in 2009 at the department for cardiovascular surgery. CHG was defined as HbA1c >= 6.0%. Patients with advanced chronic kidney disease (CKD) were excluded. The incidence of postoperative AKI and its association with CHG was analyzed by univariate and multivariate logistic regression modeling.

RESULTS: Three-hundred-seven patients were analyzed. The incidence of AKI was 48.2%. Patients with CHG (n = 165) were more likely to be female and had greater waist circumference as well as other comorbid conditions, such as smoking, history of DM, CKD, hypertension, pulmonary hypertension, and chronic obstructive pulmonary disease (all p <= 0.05). Preoperative eGFR, atrial fibrillation (AF), history of DM and CHG were associated with an increased risk of postoperative AKI in univariate analyses. In multivariate modelling, history of DM as well as preoperative eGFR and AF lost significance, while age, CHG and prolonged OP duration (p < 0.05) were independently associated with postoperative AKI.

CONCLUSIONS: Our results suggest that CHG defined on a single measurement of HbA1c >= 6.0% was associated with the incidence of AKI after CABG. This finding might implicate that treatment decisions, including the selection of operative strategies, could be based on HbA1c measurement rather than on a recorded history of diabetes.

Cardiac complications of arteriovenous fistulas in patients with end-stage renal disease.
Alkhouli M., Sandhu P., Boobes K., Hatahet K., Raza F., Boobes Y.
Embase
Nefrologia: publicacion oficial de la Sociedad Espanola Nefrologia. 35 (3) (pp 234-245), 2015.
Date of Publication: 2015.
[Review]
AN: 615232915
Cardiovascular disease is the leading cause of the death in dialysis patients. Arteriovenous fistulas (AVFs) are associated with lower mortality and are viewed as the desired access option in most patients with advanced kidney disease needing dialysis. However, AVFs have significant and potentially deleterious effects on cardiac functions particularly in the setting of preexisting heart disease. This article provides a comprehensive and contemporary review to what is known about the impact of AVFs on: congestive heart failure, left ventricular hypertrophy, pulmonary hypertension, right ventricular dysfunction, coronary artery disease and valvular heart disease.
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'Because you can't live on love': living kidney donors' perspectives on compensation and payment for organ donation.
Shaw R.M., Bell L.J.
Embase
Health expectations : an international journal of public participation in health care and health policy. 18 (6) (pp 3201-3212), 2015. Date of Publication: 01 Dec 2015.
[Article]
AN: 615306384
CONTEXT AND OBJECTIVE: Living kidney donation accounts for approximately half of all kidney transplantation in many countries and is central to health policy focused on increasing organ supply. However, little examination of the economic consequences of living kidney donation has been undertaken from the perspective of donors themselves. This article documents living kidney donors' views regarding recompense and payment for organ donation, based on their experience.
PARTICIPANTS: Twenty-five living kidney donors from New Zealand participated in this study.
METHODS: This qualitative study, based on thematic analysis, uses semi-structured in-depth interviews to examine the experiences of living kidney donors. Themes were organized around altruism and the 'gift', perceptions of shared corporeality and identity, and donor support.
RESULTS: Most participants agreed the donation process was costly in terms of time and money. Many incurred personal costs, and some experienced financial hardship. All the participants viewed financial hardship as a barrier to organ donation and favoured recompense for direct and indirect costs. Most did not support payment for organs, and none supported commercialization.
DISCUSSION AND CONCLUSIONS: The findings show that framing organ donation as a 'gift' can stymie discussion about reciprocity, remuneration and exchange, making talk about financial recompense difficult. Financial well-being, nonetheless, has implications for the ability to care for self and others post-operatively. We conclude that the economic consequences for living kidney donors in jurisdictions where recompense for direct and indirect costs is insufficient are unfair. Review of financial assistance for live organ donors is therefore recommended.
Copyright © 2014 John Wiley & Sons Ltd.
Embase
Infectious Diseases. 47 (10) (pp 714-718), 2015. Date of Publication: 2015.
[Article]
AN: 609201801
Background: Urinary tract infections (UTIs) represent the first cause of bacterial infections in renal transplant recipients. In a period of increasing resistance to antimicrobial agents, the factors leading to the development of UTI in previously urinary colonized renal transplant recipients as well as the factors associated with recurrence of UTIs have to be determined. The aims of this retrospective study were (1) to assess the incidence of extended-spectrum beta-lactamase-producing enterobacteriaceae (ESBL-PE)-related UTI in kidney transplant recipients, (2) to identify factors associated with ESBL-PE infection and (3) to determine the risk factors for recurrence. Methods: We included all kidney transplant recipients admitted in our hospital between January 2009 and January 2012 who had a monobacterial ESBL-PE UTI or bacteriuria. Results: During the study period, 659 patients underwent kidney transplantation; 72 patients had ESBL-PE bacteriuria, representing a 10.9% prevalence, and among the latter 34 (47.2%) presented an ESBL-PE-related UTI. Fourteen patients (41.2%) experienced a UTI relapse associated with two factors: advanced age (p = 0.032) and persistent bacteriuria 48 h after appropriate antibiotic therapy (p = 0.04). No other risk factor for recurrence was found, including the presence and management of a ureteral stent during the first UTI, causative microorganisms, or diabetes mellitus. Conclusions: In this specific population, regarding the risk of relapse there is
an urgent need for prospective studies to test the best treatment strategy. Copyright © 2015 Informa Healthcare.

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503.
Assessing pharmacologic and nonpharmacologic risks in candidates for kidney transplantation.

Embase
[Article]
AN: 611648263

Purpose. Pharmacotherapy concerns and other factors with a bearing on patient selection for kidney transplantation are discussed. Summary. The process of selecting appropriate candidates
for kidney transplantation involves multidisciplinary assessment to evaluate a patient's mental, social, physical, financial, and medical readiness for successful surgery and good posttransplantation outcomes. Transplantation pharmacists can play important roles in the recognition and stratification of pharmacologic and nonpharmacologic risks in prospective kidney transplant recipients and the identification of issues that require a mitigation strategy. Key pharmacotherapy-related issues and considerations during the risk assessment process include (1) anticoagulation concerns, (2) cytochrome P-450 isoenzyme-mediated drug interactions, (3) mental health-related medication use, (4) chronic pain-related medication use, (5) medication allergies, (6) use of hormonal contraception and replacement therapy, (7) prior or current use of immunosuppressants, (8) issues with drug absorption, (9) alcohol use, (10) tobacco use, (11) active use of illicit substances, and (12) use of herbal supplements. Important areas of nonpharmacologic risk include vaccine delivery, infection prophylaxis and treatment, and socially related factors such as nonadherent behavior, communication barriers, and financial, insurance, or transportation challenges that can compromise posttransplantation outcomes. Conclusion. Consensus opinions of practitioners in transplantation pharmacy regarding the pharmacologic and nonpharmacologic factors that should be considered in assessing candidates for kidney transplantation are presented. Am J Health-Syst Pharm. 2015; 72:781-93. Copyright © 2015, American Society of Health-System Pharmacists, Inc. All rights reserved. PMID 25941253 [http://www.ncbi.nlm.nih.gov/pubmed/?term=25941253] Status EMBASE Institution (Maldonado) Department of Transplant Surgery, Vidant Medical Center, Greenville, NC, United States (Tichy) Department of Pharmacy, Yale-New Haven Hospital, New Haven, CT, United States (Rogers) Department of Pharmacy, Beth Israel Deaconess Medical Center, Boston, MA, United States (Campara) Department of Pharmacy, University of Illinois at Chicago, United States (Enser) School of Pharmacy, University of Pittsburgh, Pittsburgh, PA, United States (Doligalski) Department of Pharmacy, Tampa General Hospital, Tampa, FL, United States (Gabardi) Department of Transplant Surgery, Pharmacy and Renal Division, Brigham and Women's Hospital, Boston, MA, United States (Descourouez) Department of Pharmacy, University of Wisconsin Hospital and Clinics, Madison, United States (Doyle) School of Pharmacy, Pacific University, Hillsboro, OR, United States
Although many advances in renal transplantation have occurred over recent decades, bladder catheterization has remained a constant practice to facilitate the identification of the dome of the bladder by retrograde infusion of antibiotic solutions in its lumen prior to the creation of the cystoureteric anastomosis. In addition, the presence of the Foley catheter prevents possible tension on the newly created anastomosis between the ureter and the bladder as it allows continuous external drainage of urine and is very useful to monitor perioperative fluid balance. Although urethral catheterization provides several benefits, the optimal duration of catheterization remains a subject of controversy. The primary aim of this paper is to review the available scientific literature on the management of urethral catheters after renal transplantation and assess the pros and cons of early vs late catheter removal. Copyright © 2015 Elsevier Inc.
505.
Influence of the Interval between Renal Computed Tomographic Angiography and Kidney Transplantation on Allograft Function: A Prospective, Randomized, Controlled Trial.
Xie L., Wang X., Huang Z., Lu Y., Lin T.
Embase
Transplantation Proceedings. 47 (10) (pp 2822-2826), 2015. Date of Publication: 01 Dec 2015.
[Article]
AN: 607709379
Background Computed tomographic angiography (CTA) requires contrast agents that may cause nephropathy. We wanted to assess whether donors using contrast agents long or immediately before nephrectomy affects recipient allograft function. Methods Pairs of kidney donors and recipients in our center were recruited between May 2012 and October 2014. They were randomly allocated into the preemptive CTA (pCTA) group, in which the donors underwent CTA at least 60 days before nephrectomy, or the delayed CTA (dCTA) group, in which donors underwent CTA within 3 days before nephrectomy. Results Both groups included 43 recipients. Recovery time to normal serum creatinine levels and the numbers of recipients who had slow graft function or normal cystatin C at 1 month were significantly different between groups. At 6-month follow-up, both groups showed similar serum creatinine levels, estimated glomerular filtration rate, and rates of acute rejection. No participant had graft failure. The pCTA group had a significantly lower number of recipients with proteinuria (5 versus 13, P =.034) and slighter proteinuria (spot urine protein/Cr, 0.09 +/- 0.05 versus 0.14 +/- 0.07, P =.047). Conclusions Performing renal CTA on donors immediately before nephrectomy may increase the risk of proteinuria in recipients, but it does not appear to affect allograft function recovery or survival rate (Chinese Clinical Trial Registration: ChiCTR-TRC-11002108). Copyright © 2015 Elsevier Inc.
Outcomes of living kidney donors with rheumatoid arthritis.
Cheungpasitporn W., Thongprayoon C., Ungprasert P., Erickson S.B.
Embase
[Article]
AN: 611882780
BACKGROUND: Patients with rheumatoid arthritis are more likely to have reduced kidney function develop over time. The aim of this study was to assess the clinical and safety outcomes of living kidney donors with rheumatoid arthritis. METHODS: A retrospective cohort study at a tertiary referral hospital to assess the outcomes of living kidney donors with rheumatoid arthritis. All 6 adults with rheumatoid arthritis who underwent nephrectomy as living kidney donors between January 2000 and September 2014 were included. Eighteen nondonors with rheumatoid arthritis (3 nondonors per donor) were randomly selected for comparison by matching the year of birth and comorbidity score.
RESULTS: None of the donors with rheumatoid arthritis had a flare-up of arthritis at a median follow-up time of 5.9 years (interquartile range [IQR], 3.1-7.5 years), while 5 (27.8%) nondonors with rheumatoid arthritis had a flare-up at a median follow-up time of 4.7 years (IQR, 3.1-6.7 years). After nephrectomy, donors’ estimated glomerular filtration rate decreased to a mean of 43.53 (SD, 4) mL/min per 1.73 m² at 7 days after the index date. The estimated glomerular filtration rate of donors subsequently increased significantly at rate of 3.99 mL/min per 1.73 m² (P<.001). None of the donors with rheumatoid arthritis had end-stage renal disease develop or died at median follow-up times of 5.9 (IQR, 3.1-7.5) years and 8.2 (IQR, 5.8-9.7) years, respectively.

CONCLUSION: Healthy kidney donors with rheumatoid arthritis have good outcomes, with no increased risk of decline in renal function, end-stage renal disease, or death.

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507.
Diagnosis and management of ureteral complications following renal transplantation.
Duty B.D., Barry J.M.

Embase

[Review]
AN: 609065074

When compared with maintenance dialysis, renal transplantation affords patients with end-stage renal disease better long-term survival and a better quality of life. Approximately 9% of patients will develop a major urologic complication following kidney transplantation. Ureteral complications
are most common and include obstruction (intrinsic and extrinsic), urine leak and vesicoureteral reflux. Ureterovesical anastomotic strictures result from technical error or ureteral ischemia. Balloon dilation or endoureterotomy may be considered for short, low-grade strictures, but open reconstruction is associated with higher success rates. Urine leak usually occurs in the early postoperative period. Nearly 60% of patients can be successfully managed with a pelvic drain and urinary decompression (nephrostomy tube, ureteral stent, and indwelling bladder catheter). Proximal, large-volume, or leaks that persist despite urinary diversion, require open repair. Vesicoureteral reflux is common following transplantation. Patients with recurrent pyelonephritis despite antimicrobial prophylaxis require surgical treatment. Deflux injection may be considered in recipients with low-grade disease. Grade IV and V reflux are best managed with open reconstruction. Copyright © 2015 Editorial Office of Asian Journal of Urology. Production and hosting by Elsevier (Singapore) Pte Ltd.

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508.
Current practices in coronary artery disease evaluation of renal transplant candidates prior to renal transplantation.
Wong N., Tee P.S., Kee T.Y.-S., Tan J.W.C.
Embase
[Review]
Cardiovascular disease is the leading cause of morbidity and mortality in renal transplant recipients and candidates awaiting transplant. Pre-transplant coronary artery disease evaluation can aid in determining transplant candidacy, identifying patients who may benefit from pre-operative cardiac intervention, and implementing measures to reduce perioperative and posttransplant cardiovascular events. However, the choice of investigations and approach in evaluation has yet to be well defined. This article aims to review the evidence for the use of non-invasive investigations and coronary angiography in prognostication, as well as the evidence for revascularization in reducing future cardiac events. The article will also summarize international recommendations and describe the local practice in coronary artery disease evaluation prior to transplant. Copyright © The Author(s) 2015.

509.

Donation after circulatory death: The current state and technical approaches to organ procurement.

Algahim M.F., Love R.B.

Embase

Current Opinion in Organ Transplantation. 20 (2) (pp 127-132), 2015. Date of Publication: 01 Jan 2015.

[Review]

AN: 608876176
Purpose of review In this review, we discuss the current state of donation after circulatory death (DCD). We define the DCD donor and describe the current protocols in management of the DCD patient. We then discuss current techniques in organ procurement of the lung and abdominal organs. Recent findings Although donation after brain death is preferable to DCD, recent data have demonstrated acceptable early outcomes in both thoracic and abdominal organ transplant. In spite of advancements in surgical techniques and organ preservation, much has yet to be learned to minimize warm ischemia time and reperfusion injury in the DCD population. Summary In light of the continually growing disparity between organ supply and demand, DCD has regained traction as a means to increase the donor pool. Copyright © 2015 Wolters Kluwer Health, Inc. All rights reserved.

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510.
Efficacy and safety of hand-assisted laparoscopic nephrectomy in living-donor transplantation.
Nakamura Y., Iwamoto H., Konno O., Yokoyama T., Kihara Y., Hama K., Shimazu M., Kawachi S.
Embase
Journal of Tokyo Medical University. 73 (4) (pp 377-382), 2015. Date of Publication: October 2015.
[Article]
AN: 608742164
Introduction: Recently, some 1,500 living-donor kidney transplantations have been performed per year in Japan. Meanwhile, the number of kidney transplantation cases involving brain-dead donors has increased to approximately 60 cases annually. In addition to eliminating the long waiting period associated with deceased-donor organ transplantation, living-donor organ transplantation prevents ischemia. Laparoscopic nephrectomy is technically more difficult to perform in living than in deceased donors. Hand-assisted laparoscopic donor nephrectomy (HALDN), however, is safe and effective. Methods: Using healthy donors aged between 20 and 70 years, 100 HALDNs were performed at this institute between July 2003 and December 2011. Patient outcomes in this group were compared with those of 15 open donor nephrectomies (ODNs) performed between January 1995 and June 2003. Results: Hand-assisted laparoscopic donor nephrectomy was successful in all 100 patients, and no patient required conversion to laparotomy. Estimated blood loss was 43.4 g, which was significantly lower than that with ODN (426.5+/−247.6 g; P<0.001), and no patient required blood transfusion. Mean operating time was 188.4 and 228.4 min (P<0.01) and postoperative hospitalization period 7.9 and 13.0 days (P<0.001) with HALDN and ODN, respectively. Conclusions: These results indicate that HALDN is superior to ODN in terms of operating time, blood loss, postoperative hospitalization, recovery period, and donor satisfaction. However, the procedure is technically demanding and should be performed only by surgeons with advanced laparoscopic skills. Based on the present findings, HALDN may be considered as safe and, hopefully, will increase the living donor pool at our center.

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Renal artery anastomosis to internal or external iliac artery in kidney transplant patients.
Daowd R., Al Ahmad A.
Embase
Saudi journal of kidney diseases and transplantation : an official publication of the Saudi Center for Organ Transplantation, Saudi Arabia. 26 (5) (pp 1009-1012), 2015. Date of Publication: 01 Sep 2015.
[Article]
AN: 607610046
PMID
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2015

Thirty Years of Pancreas Transplantation at Leiden University Medical Center: Long-term Follow-up in a Large Eurotransplant Center.
Embase
Transplantation. 99 (9) (pp e145-e151), 2015. Date of Publication: 01 Sep 2015.
[Article]
AN: 608161529
Background An overview of 30 years of pancreas transplantation at a high volume center. Analysis of patient survival-and graft survival-associated risk factors. Methods All pancreas transplantations performed in our center from January 1, 1984, till December 31, 2012, were evaluated. Covariates influencing pancreas graft survival were analyzed using both univariate and multivariate analysis and Kaplan-Meier analysis. Results In the study period, 349 pancreas
transplantations were performed. With the introduction of modern induction therapy in 1999, 5-year patient survival improved to 92.0% (P = 0.003). Five-year pancreas graft survival improved to 80.3% (P = 0.026). Pancreas graft survival was influenced by left or right donor kidney, transplant type, local origin of procurement team, pancreas cold ischemia time, recipient cerebrovascular disease. Pancreas donor risk index increased to 1.39 over the years and pancreas donor risk index 1.24 or higher is a risk factor for graft survival (P = 0.007). Conclusions This study has shown excellent results in patient and pancreas graft survivals after 30 years of pancreas transplantation in a high volume center. Different donor, transplant, and recipient related risk factors influence pancreas graft survival. Even with higher risk pancreas donors, good results can be achieved. Copyright © 2015 Wolters Kluwer Health, Inc.


Status EMBASE

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In renal transplanted patients, lymphoceles and lymphorrhea are well-known lymphatic complications. Surgical damage of the lymphatics of the graft during the procurement and of the lymphatic around the iliac vessels of the recipients has been associated with development of lymphatic complications. However, lymphatic complications may be related to medical factors such as diabetes, obesity, blood coagulation abnormalities, anticoagulation prophylaxis, high dose of diuretics, delay in graft function and immunosuppressive drugs. Consistently, immunosuppression regimens based on the use of mTOR inhibitors, especially in association with steroids and immediately after transplantation, has been associated with a high risk to develop lymphocele or lymphorrhea. In addition, several studies have demonstrated the association between rejection episodes and lymphatic complications. However, before the discovery of reliable markers of lymphatic vessels, the pathogenic mechanisms underlying the development of lymphatic complications during rejection and the influence of mTOR inhibitors remained not fully understood. The recent findings on the lymphatic systems of either native or transplanted kidneys together with the advances achieved on lymphangiogenesis shared some lights on the pathogenesis of lymphatic complications after renal transplantation. In this review, we describe the surgical and medical causes of lymphatic complications focusing on the rejection and immunosuppressive drugs as causes of lymphatic complications. Copyright © The Author 2015. Published by Oxford University Press on behalf of ERA-EDTA.
Computed tomography in the preoperative and postoperative evaluation of kidney transplant patients.
Sarsengaliyev T., Chuvakova E., Tsoy B., Zhangalova A., Gaipov A.
Embase
Experimental and Clinical Transplantation. 13 (pp 88-90), 2015. Date of Publication: November 2015.
[Article]
AN: 607691039
Objectives: Computed tomography is required for selection of living donors for kidney transplant. We assessed the diagnostic relevance and effectiveness of multiphase contrast-enhanced computed tomography angiography for evaluating patients before and after transplant.
Materials and Methods: Thirty-two potentially living kidney donors (15 men and 17 women) underwent multiphase computed tomography angiography for evaluation before kidney transplant and 2 posttransplant recipients underwent this test owing to abnormal vascularization. Computed tomography angiography was used to determine parenchymal blood-flow conditions and vascular architecture of the kidney grafts. All of the 34 patients underwent prestudy Doppler ultrasound. Results: Additional renal arteries were found in 11 patients (32.3%). From them, a single additional renal artery, situated from the aorta to the lower segment of the kidney, was observed in 8 (72.7%) patients; dual additional renal arteries with equivalent caliber trunks were observed in 3 (27.3%) patients. An additional renal artery occurred more often in women in 6 (54.5%) donors. Concomitant renal pathology was detected in 3 (9.3%) of 32 donors: simple cysts in 2 donors and hydro nephrosis transformation in 1 donor. These 3 cases represented an accidental discovery and were therefore excluded from the list of donors. In addition, all donors underwent excretory-phase computed tomography, and their renal function and urinary collecting system results were evaluated. Two recipients with graft dysfunction presented with decreased venous return and delayed arterial filling of the renal arteries that manifested as delayed contrast in the kidney graft medulla. Renal parenchymal ischemic zones were consistent with microvasculature thrombosis, the most common cause of vascular complications in these recipients. Conclusions: Multiphase computed tomography angiography is a necessary tool for assessing the structure and condition of vascular architecture in kidney donors and recipients. Individuals with ambiguous Doppler results, this test should be required; it is also warranted when renal graft vascular complications are suspected. Copyright © Baskent University 2015 Printed in Turkey. All Rights Reserved.
Status
EMBASE
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The impact and treatment of obesity in kidney transplant candidates and recipients.
Chan G., Garneau P., Hajjar R.
Embase
Date of Publication: 01 Aug 2015.
[Review]
AN: 613401188
The prevalence of obesity in patients with chronic kidney failure and renal transplant candidates has paralleled the epidemic in the general population. The associated risks of surgical complications and long-term cardiovascular death are significant: most transplant centers consider obesity a relative contra-indication for transplant. Few studies have focused on conservative weight loss strategies in transplant patients. Studies using administrative databases have found that only a minority of wait-listed patients lose weight and with no apparent benefit to transplant outcomes. The only clinical trial in this area found that an intensive weight-loss program had significantly better success (to listing) than self-directed weight loss. However, only a minority that succeeded with the help of a program (36 %), while the “diet and exercise” group had negligible results. Laparoscopy has radically shortened the recovery time and decreased the complications associated with bariatric surgery. Reports in transplant patients, who were previously deemed too medically complex, have demonstrated a dramatic and rapid weight loss. The only randomized clinical trial in patients with CKD, which compared sleeve gastrectomy to best medical care clearly favoured the surgical arm for weight loss, but was too small to assess other outcomes. The emerging experience is small but quite promising. Surgical complications
and the effect on immunosuppression remain the chief concerns regarding the use of bariatric surgery in transplant patients. Rigorous prospective studies will be essential to properly evaluate the expected weight loss and the effect on pharmacokinetics of immunosuppressive medications. A routine role for bariatric surgery in transplantation would require evidence of improvements in patient-important outcomes and evidence of safety. Copyright © 2015 Chan et al.

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516.
Minimally invasive radiologic techniques in the treatment of uretero-enteric fistulas.
Lang E.K., Allaei A., Robinson L., Reid J., Zinn H.
Embase
Diagnostic and Interventional Imaging. 96 (11) (pp 1153-1160), 2015. Date of Publication: November 2015.
[Article]
AN: 612822876
The goal of this study was to assess the efficacy of minimally invasive interventional radiologic (IR) techniques in the management of uretero-enteric fistulae in comparison to established surgical modalities. Twenty-five patients (16 men, 9 women) with a mean age of 47 (range: 19-77 years) with uretero-enteric fistulae were treated with percutaneous nephrostomy, double "J" stent, radiologic uretero-neocystostomy, and radiologic uretero-pyelocalicostomy. All patients had a single fistula each. Uretero-enteric fistulas were due to direct or iatrogenic trauma in 14 patients (uretero-ileal fistulas, nCombining double low line6; uretero-colonic fistulas, nCombining double
low line4; uretero-duodenal fistulas, nCombining double low line2; uretero-pancreatic fistula, nCombining double low line1; uretero-fallopian tube, nCombining double low line1), complications of pelvic neoplasms in 4 patients (uretero-sigmoid fistulas, nCombining double low line4), inflammatory disease in 4 patients (uretero-ileo fistulas, nCombining double low line2; uretero-sigmoid fistulas, nCombining double low line2), and avascular necrosis of renal transplants in 3 patients (uretero-sigmoid fistulas, nCombining double low line3). Drainage by percutaneous nephrostomy and double "J" stent resulted in closure of 8 uretero-enteric fistulae over 7-16 weeks. Four uretero-enteric fistulae obliterated after re-routing urine flow using 3 radiologic uretero-neocystostomies and one IR pyelocalicostomy. In other patients, flow through the fistulae was substantially decreased by five double "J" stents and 3 percutaneous nephrostomies. The duration of inpatient hospitalization was significantly less for patients managed successfully by IR procedures than those treated by surgical modalities, 5.07 versus 10.5 days mean (P<0.05). IR procedures provided definitive treatment in 48% of uretero-enteric fistulae at significantly reduced inpatient hospitalization and cost. As palliative treatment, it improved the quality of life. Copyright © 2015 Editions francaises de radiologie.

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Management of Renal Involvement in Scleroderma.
Stern E.P., Steen V.D., Denton C.P.
Embase
Current Treatment Options in Rheumatology. 1 (1) (pp 106-118), 2015. Date of Publication: 01 Mar 2015.
[Review]
AN: 611920014
The major renal manifestation of systemic sclerosis is scleroderma renal crisis (SRC). This condition is characterized by accelerated phase hypertension and acute kidney injury (AKI). The management of renal crisis was revolutionized by the introduction of angiotensin-converting enzyme (ACE) inhibitors more than 30 years ago, although in the current era, there is still a significant proportion of patients who have poor outcomes. Recognizing patients at high risk is a key part of the management of SRC. In particular, patients with early diffuse skin involvement from scleroderma and those who have the anti-RNA polymerase III autoantibody are at significantly increased risk for renal crisis. In these patient groups, we recommend avoidance of significant corticosteroid doses and regular home blood pressure monitoring. These measures should reduce the incidence of SRC and ensure its early diagnosis when it does appear. There is no role for ACE inhibitor prophylaxis of SRC. Patients with SRC should be hospitalized and receive careful supportive care. The condition presents with renal, hematological, and cardiac complications in the context of a complex multisystem rheumatological disease, so good interdisciplinary care is a key goal to improve outcomes. The specific treatment for SRC remains ACE inhibitors, which should be titrated to the highest tolerated dose and continued indefinitely in all patients, regardless of renal recovery or establishment on dialysis. Other antihypertensives can be used in addition to achieve optimal blood pressure control. Patients with SRC can recover renal function after more than 2 years on dialysis, so renal transplantation should not be undertaken during this early period. Copyright © 2015, Springer International Publishing AG.
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Ureteroscopy for nephrolithiasis in transplanted kidneys.
Swearingen R., Roberts W.W., Wolf J.S.
Embase
The Canadian journal of urology. 22 (2) (pp 7727-7731), 2015. Date of Publication: 01 Apr 2015.
[Article]
AN: 612550643
INTRODUCTION: While percutaneous nephrolithotomy (PCNL) is often the procedure of choice for renal and ureteral calculi in transplant kidneys, retrograde ureteroscopy (URS) is a less frequently applied but excellent option if stone burden is small. We retrospectively examined nine surgical cases performed in seven patients in what appears to be the largest single institutional series reported to date.

MATERIALS AND METHODS: Seven patients underwent nine retrograde URS between June of 2009 and September of 2013, by two endourologists. These cases were reviewed retrospectively.

RESULTS: Among the nine procedures, we were able to address the stone(s) endoscopically in seven. Among these procedures, laser lithotripsy was used in six cases, and basket stone extraction was applied in four procedures. Ureteral stents were placed following six procedures with ureteral access and treatment. Postoperative imaging revealed the patient to be stone free after five of the seven procedures with ureteral access and treatment. There were two postoperative urinary tract infections, and no major complications. Of the nine total procedures, six were outpatient, two were followed by observation stay < 24 hours, and one patient was admitted > 24 hours. Among the two failures, one underwent PCNL and the other had percutaneous nephrostomy (PNT) placed but expired from unrelated causes prior to the intended PCNL.

CONCLUSIONS: Retrograde URS with laser lithotripsy and/or basket extraction is a reasonable option for treating small renal transplant stones, with most patients in our series being discharged as outpatients, having complete stone clearance and avoiding PCNL.

PMID
Surgical complications following 1670 consecutive adult renal transplantations: A single center study.

Lempinen M., Stenman J., Kyllonen L., Salmela K.


BACKGROUND AND AIMS: The aim of the study was to clarify the frequency and the sequel of surgical complications occurring within 1 year after renal transplantation. PATIENTS AND METHODS: Surgical complications after 1670 consecutive adult kidney transplantations performed between 2000 and 2009 were retrospectively analyzed. In 2%, a living-related allograft was used, and 10% were retransplantations. An intravesical technique without stenting was used for the ureteric implantation.

RESULTS: There were 282 surgical complications occurring in 259 (15.5%) transplantations. Ureteral obstruction occurred in 53 (3.1%), lymphocele in 39 (1.5%), postoperative hemorrhage in 36 (2.1%), and renal vein thrombosis in 22 (1.3%) patients, respectively. Out of the 17 lung emboli, 4 were fatal. Male recipients had twice as much ureteral stenosis as female (2.4 vs 1.2%, p < 0.05), and the opposite was true of urinary leakage (1.8% vs 4.0%, p < 0.025). Five-year patient and graft survival was impaired in patients with complications compared with patients without complications. Five-year patient survival was 92% versus 88% and graft survival 87% versus 74%.

CONCLUSION: Surgical complications impair patient and graft survival after kidney transplantation.

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520.
Minilaparoscopy vs. standard laparoscopic donor nephrectomy: comparison of safety, efficacy and cosmetic outcomes in a randomized clinical trial.
Embase
Urology journal. 12 (4) (pp 2223-2227), 2015. Date of Publication: 01 Jul 2015.
[Article]
AN: 610926878
PURPOSE: This study was conducted to compare safety, efficacy and cosmetic outcome between standard laparoscopic live donor nephrectomy (sLDN) and mini-laparoscopic donor nephrectomy (mLDN) in a randomized clinical trial. MATERIALS AND METHODS: From March 2012 to June 2013, 100 consecutive kidney donors were randomly assigned to two equal groups for laparoscopic donor nephrectomy. mLDN: Six to eight centimeters Pfannenstiel incision was made slightly above pubis symphysis and 11 millimeters trocar was fixed through exposed fascia using open technique. Five mm port was placed under direct vision at the umbilicus for camera insertion and two 3.5 mm ports were placed in subxiphoid and paraumbilical area. sLDN: Ten mm port was placed at umbilicus using open access technique for camera insertion. Five mm trocar
for grasping and 11 mm trocar for vascular clipping were placed at subxiphoid and paraumbilical areas under direct vision, respectively. The second 5 mm trocar was placed in suprapubic area. Cosmetic appearance was assessed three months after surgery by using the Patient Scar Assessment Questionnaire (PSAQ).

RESULTS: Demographic data of the patients was not significantly different between two groups. Total operative time and ischemic time was nearly similar in both groups (104 +/- 21 vs. 114 +/- 24 min; P = .327 and 4.03 vs. 4.07 min; P = .592). There were no cases of conversion to open surgery. Mean hospital stay was similar between the two groups [2.1 (2-5) vs. 2.4 (2-5) days; P = .346]. Kidney graft function assessed by serum creatinine values (mg/dL) of recipients, was equivalent in both groups (1.58 vs. 1.86; P = .206). Mean appearance score (34 vs. 29) and consciousness score (22 vs. 18) in PSAQ showed significantly better results in the mLDN group.

CONCLUSION: Our experience in this study revealed that peri- and post-operative findings were comparable between sLDN and mLDN, but mLDN has significant better cosmetic appearance than standard laparoscopic approach.

Surgical team composition has a major impact on effectiveness and costs in laparoscopic donor nephrectomy.


Embase


PURPOSE: Limited evidence exists that optimization of surgical team composition may improve effectiveness of laparoscopic donor nephrectomy (LDN). METHODS: A retrospective cohort study with 541 consecutive LDNs. From 2003 to 2012, surgical team composition was gradually optimized with regard to the surgeons' experience, proficient assistance and the use of fixed teams.

RESULTS: Multivariable analysis showed that a surgical team with an experienced surgeon had a significantly shorter operation time (OT) (-18 min, 95% CI -28 to -9), less estimated blood loss (EBL) (-64 mL, 95% CI -108 to -19) and shorter length of stay (LOS) (-1 day, 95% CI -1.6 to 0). Proficient assistance was also independently associated with a shorter OT (-43 min, 95% CI -53 to -33) and reduced EBL (-58 mL, 95% CI -109 to -6), whereas those procedures performed by fixed teams were related to a shorter operation (-50 min, 95% CI -59 to -43) and warm ischemia time (-1.8, 95% CI -2.1 to -1.5), a reduced mean complication grade (-0.14 per patient, 95% CI -0.3 to -0.02) and a shorter LOS (-1.1 day, 95% CI -1.7 to -0.5). Health care costs for LDN by one staff surgeon with unproficient assistance were 7.707 Euro, whereas costs for LDN by two staff surgeons in fixed teams were 5.614 Euro.

CONCLUSIONS: Surgical team composition has a major impact on variables that reflect the effectiveness of LDN from the donors' perspective. Health care costs are lower for LDNs performed by two experienced surgeons in fixed team composition. We advocate the use of two experienced surgeons in fixed team composition for LDN.

Mini-laparoscopic live donor nephrectomy with the use of 3-mm instruments and laparoscope.
Breda A., Schwartzmann I., Emiliani E., Rodriguez-Faba O., Gausa L., Caffaratti J., de Leon X.P., Villavicencio H.

Embase
[Article]
AN: 608356186

PURPOSE: To analyze our preliminary outcomes on the use of 3 mm instruments for laparoscopic live donor nephrectomy (LLDN). METHODS: Our series includes thirteen patients, who underwent LLDN using 3-mm instruments and laparoscope and 5-mm transumbilical trocar. The patients were followed at 7 and 14 days from discharge and were specifically asked about their cosmetic satisfaction. At follow-up, the recipient graft function was controlled, as well as the donor’s cosmetic results. Eight months after surgery, all thirteen patients were asked to fill out the Patient Scar Assessment Questionnaire and Scoring System (PSAQ).

RESULTS: All patients presented good recovery after surgery. Regarding cosmetic outcomes, the donors expressed their satisfaction toward the minimal incision size and optimal esthetic results at 7 and 14 days from discharge home. The low scores on each section of the PSAQ confirmed the favorable outcomes. Early graft function was satisfactory at 1 and 3 months after the kidney transplantation. Furthermore, there were no major complications in the recipients.

CONCLUSIONS: Our persistent positive results with the use of 3-mm instruments during LLDN support this technique as a good alternative to the standard laparoscopic approach for minimizing the incision site, while maintaining safety and excellent clinical outcomes. The fact that the general laparoscopic standards are maintained could make this approach a very attractive alternative to the other minimally invasive approaches for live donor nephrectomy. The hope is in that the higher degree of satisfaction in the donor population demonstrated in this study may likely enhance living kidney donation.

PMID
OBJECTIVES: This study is to compare the short and long-term renal function between adult recipients of living laparoscopic and open donors (LR vs OR) to highlight the effect of the surgical technique on graft function. Moreover, we chose to compare the organic (hypertension, proteinuria, serum creatinine) and psychological (aspect of libido, need for anxiolytics) long-term effect of the surgery between laparoscopic and open donors (LD vs OD).

METHODS: After census of adult recipients and living donors between 2003 and 2012, and after application of exclusion criteria and selection of homogeneous groups of donors and recipients, a retrospective cohort study was conducted between October 2008 and January 2012. In recipients, renal function in the short term was reported by the value of serum creatinine at +/- D5 post-op and the long-term values of serum creatinine at 6 and 12 months after surgery. Delayed graft function was defined by a serum creatinine value >= 2.5 mg/dl on D5 post-op. A questionnaire for donors was established.

RESULTS: The two groups OR and LR were homogeneous concerning age, sex and body mass index (BMI). Different groups OD and LD, chosen according to the variable of interest, were made homogeneous. Despite a different warm ischemia time between the 2 groups (175.54 seconds in LR vs 44.67 seconds in OR, p < 0.001), renal function in the short- and long-term in recipients...
was not statistically different (At day 5, 1.54 vs 1.50 mg/dl, p = 0.781; at 6 months, 1.37 vs 1.38, p = 0.871; at 12 months, 1.34 vs 1.36, p = 0.569, in OR and LR respectively). Similarly, there was no significant statistical difference concerning organic and psychological complications between OD and LD except for a shorter period between hospital discharge and return to work in LD.

CONCLUSION: In our center, renal function in the short- and long-term was similar in OR and LR. Apart from the advantages offered by the laparoscopic technique, organic and psychological long-term effects were similar between OD and LD. Nevertheless, laparoscopy seemed to facilitate kidney donation and is requested by almost all living donors independently of their social status.

PMID

OBJECTIVES: Donating a kidney while alive is an experience associated with important benefits for donors and recipients. In view of the inexistence of Spanish investigations, we aimed: (a) to compare the anxiety and concerns of Spanish living kidney donor candidates relating to themselves as a function of gender and their level of concern about potential kidney recipients, and (b) to analyze whether the results regarding anxiety symptoms were clinically significant compared with a representative sample of the general Spanish population. METHODS: We selected 67 donor candidates whom we evaluated using the State Trait Anxiety Inventory (STAI) and the Scale of Concerns Regarding Living Kidney Donation.
RESULTS: (1) The donor candidates who were more concerned about the recipients, in comparison with those who were less concerned, showed more state-anxiety and more concerns about themselves as donors, (2) the subgroup of more concerned females exhibited greater anxiety symptoms and concern about the consequences that nephrectomy could have on themselves, and (3) for all donor candidates, regardless of gender or level of concern about the recipient, the anxiety levels were not clinically significant.

CONCLUSIONS: Anxiety in donor candidates is similar to or lower than the normative levels.

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525.
Safety and efficacy of outpatient biopsy in renal transplantation.
Torres-Rodriguez IB; Castella-Fierro E; Serres-Creixans X; Salcedo-Allende M; Azancot-Rivero MA; Perello-Carrascosa M; Sellares-Roig J; Cantarell-Aixandri C; Moreso-Mateos F; Seron-Micas D.
UI: 25415575
BACKGROUND: In many centers patients are hospitalised to perform a renal allograft biopsy. 
AIM: To evaluate the safety and efficacy of outpatient renal allograft biopsies.
METHODS: Since December 2011 we perform renal allograft biopsies as an outpatient procedure. Exclusion criteria for performing an outpatient biopsy included: 1.) anticoagulant treatment, 2.) thrombocytopenia <50,000/mm3, 3.) body mass index >35kg/m2 and 4.) uncontrolled hypertension. The number and severity of complications were compared with an historical cohort of 124 biopsies done between 2007 and 2011 when all patients were hospitalised for the procedure and with 42 patients biopsied during hospitalisation between 2011 and 2013.
RESULTS: Between 2011 and 2013, 210 (95%) out of 230 biopsies indicated in the outclinic were performed as an outpatient procedure (95%). The incidence of major complications (bleeding requiring blood transfusion and/or embolisation) was 0.8% between 2007 and 2011 and 2.4% in biopsies between 2011 and 2013 in hospitalised patients (p=0.475). No major complications were observed in the outpatient biopsy group. Minor complications (hematuria, hematoma or fistula not requiring transfusion or embolisation) were also not different between groups (3.2%, 7.1% and 2.7%; respectively). Sample size adequacy according to the Banff criteria was not different among groups (p=0.052).
CONCLUSION: Ambulatory renal allograft biopsy is a safe and efficient procedure.

Status
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Torres-Rodriguez, Irina B; Castella-Fierro, Eva; Serres-Creixans, Xavier; Salcedo-Allende, Maite; Azancot-Rivero, Maria A; Perello-Carrascosa, Manel; Sellares-Roig, Joana; Cantarell-Aixandri, Carme; Moreso-Mateos, Francesc; Seron-Micas, Daniel.
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20141122
Year of Publication
2014

526.
Transvaginal route for kidney extraction in laparoscopic donor nephrectomy.
Gurluler E; Berber I; Cakir U; Gurkan A.
BACKGROUND AND OBJECTIVES: The aim of this retrospective study was to compare conventional laparoscopic living-donor nephrectomy with transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy in terms of feasibility and reproducibility. METHODS: A total of 115 consecutive female patients who underwent laparoscopic living-donor nephrectomy (n=70) or transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy (n=45) were included and compared in terms of operative characteristics, as well as donor and recipient outcomes. RESULTS: No significant difference was observed between the laparoscopic living-donor nephrectomy and transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy groups in terms of mean duration of warm and cold ischemia, operation time, length of hospital stay, arterial anastomoses, visual analog scale pain scores, serum creatinine levels, and receiver outcomes, whereas a significantly higher number of venous anastomoses was noted in the laparoscopic living-donor nephrectomy group than in the transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy group (P=.029). CONCLUSIONS: Transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy seems to be a feasible and reproducible alternative to conventional laparoscopic living-donor nephrectomy in female donors provided the viability of the vagina as an organ retrieval route.

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Gurkan, Alihan. International Hospital Organ Transplant Center, Acibadem University, Istanbul, Turkey.
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https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4236079
Social aspects of kidney donation in Tunisia: a study of 189 living related donors.
Kerkeni W., Bouzouita A., Ben Slama M.R., Derouich A., Abderrahim E., Ben Abdallah T., Khedher A., Chebil M.
Embase
Arab journal of nephrology and transplantation. 7 (2) (pp 129-131), 2014. Date of Publication: 01 May 2014.
[Article]
AN: 615307515
INTRODUCTION: Our aim was to study the demographic and social characteristics of 189 living related kidney donors in Tunisia, and explore some of the social consequences of kidney donation. METHODS: This is a descriptive retrospective study of 189 living related kidney donors who had their nephrectomy in Charles Nicolle Hospital between 1986 and 2009. The demographic and social characteristics at the time of donation were studied and changes in the social and occupational status after donation were assessed.
RESULTS: The average age at the time of donation was 41.8 +/- 12.1 years (range: 20-67 years). Female predominance (59.2% of cases) was noted. Donors were siblings in 46% of cases, parents in 42% of cases and spouses in only 9% of cases. There were more mothers than fathers, more wives than husbands, but fewer sisters than brothers. Twenty-six percent of donors were illiterate and 40% were unemployed at the time of donation. After donation, the social status remained stable for 70% of donors. No divorces were reported. The occupational status was unchanged in 94% of cases. Sixteen percent of female donors had at least one pregnancy after nephrectomy. Nearly 90% of surveyed donors whose recipients were alive at the time of the survey were still in favor of kidney donation.
CONCLUSIONS: Women play an important role in living related kidney donation in Tunisia. Family situation and occupational status did not seem to be compromised after nephrectomy, and most donors were willing to donate if the decision was to be repeated.
PMID
Renal transplantation and polycystic: surgical considerations.
Rodriguez-Faba O., Breda A., Villavicencio H.
Embase
Actas urologicas espanolas. 38 (1) (pp 28-33), 2014. Date of Publication: 01 Jan 2014.
[Review]
AN: 611318695
BACKGROUND: The indication and timing of nephrectomy in patients with autosomal dominant polycystic kidney disease (ADPKD) remain controversial, especially in patients who are candidates to renal transplantation (RT). The main surgical options such as unilateral vs. bilateral nephrectomy, nephrectomy before vs. after RT, or simultaneous nephrectomy and transplantation, are herein discussed. OBJECTIVE: Evidence acquisition of the best surgical management available for ADPKD in the context of kidney transplantation.
ACQUISITION OF EVIDENCE: Systematic literature review in PubMed from 1978 to 2013 was conducted. Articles selected included: randomized controlled trials and cohort studies. Furthermore, well designed ADPKD reviews were considered for this study.
SYNTHESIS OF EVIDENCE: Laparoscopic nephrectomy in ADPKD is a safe procedure with an acceptable complication rate. Unilateral nephrectomy has advantages over the bilateral one regarding the perioperative complication rate. Although the timing of nephrectomy is controversial, it seems that simultaneous nephrectomy and renal transplantation does not increase surgical morbidity neither affect graft survival.
CONCLUSIONS: Simultaneous nephrectomy and RT appears to be an acceptable alternative to conventional two-stage procedure without any increased morbidity, in the context of ADPKD.
Furthermore, laparoscopic nephrectomy performed in experienced centres is a safe alternative to conventional approach.

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This paper asks whether the Philippines should focus on ways of dealing with end-stage renal disease by getting more transplantable kidneys from the dead. Would it be more ethical to put the burden to donate on the dead (who have already lost their chance to consent) than on the living (who can consent)? Given the risks involved in undergoing nephrectomy and the lack of benefits arising from the procedure to donors, the dead should be the first to put their kidneys on the line. In the Philippines, unfortunately, living donors have had to bear the greater burden in this regard. Starting with a brief account of developments surrounding the impact of the Declaration of Istanbul on the situation in the Philippines as well as in other countries, the paper examines what the living have been expected to do, what they have actually done, and what lessons the experience with living donors offers for the understanding of cadaver transplants. The paper then
looks at possible ways of increasing the sources of kidneys for transplantation and asks if these ways could be implemented successfully and ethically in the Philippines.

PMID

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Date Created
20161010

Year of Publication
2014

Ancillary personnel in Spanish and Latin-American hospitals faced with living related kidney donation.


Embase
[Article]
AN: 607595525

INTRODUCTION: Ancillary hospital personnel represent an important body of opinion because as they work in a hospital their opinion has more credibility for the general public as a result of their activity in hospitals. However, in most cases they do not have any health care training which means that their attitude could be based on a lack of knowledge or unfounded fears.

OBJECTIVE: To analyze the attitude toward living kidney donation (LKD) among ancillary personnel in Spanish and Latin-American hospitals and to analyze the variables that might influence such attitude.

PATIENTS AND METHOD: from <<International Collaborative Donor Project>> a random sample was taken among ancillary personnel in Spain, Mexico and Cuba hospitals. Attitude towards LKD was evaluated using a validated, anonymously filled and self-administered survey.
RESULTS: 951 professionals were surveyed (Spain: 277, Mexico: 632, Cuba: 42). 89% (n=850) are in favor of related kidney donation, lowering to 31% (n=289) in non-related donation. Of the rest, 8% (n=78) are not in favor and the 3% (n=23) are unsure. By country, Cubans (98%) and Mexicans (91%) are more in favour than Spanish (84%) (P=.001). The following variables are related to favourable attitude towards LKD: female sex (P=.017), university degree (P=.010), work in health services (P=.035), labour stability (P=.016), personal experience in donation and transplantation (P=.001), positive attitude toward cadaveric donation (P<.001), belief that he or she might need a transplant in the future (P<.001), positive attitude towards living liver donation (P<.001), a willingness to receive a donated living liver if needed (P<.001), having discussed the subject of organ donation and transplantation within the family (P<.001), partner's positive attitude towards the subject (P<.001), participation in voluntary type pro-social activities (P=.002) and not being concerned about possible mutilation after donation (P<.001) CONCLUSIONS: The attitude toward living related kidney donation is favourable among ancillary personnel in Spanish and Latin-Americans hospitals. Because living donation is a better source of organs than cadaveric ones, this favourable predisposition can be used as promoting agent of living donation in order to develop it in Spanish-speaking countries.
The Role of Laparoscopy-assisted Renal Autotransplantation in the Treatment of Primary Ureteral Tumor.
Cheng Y.-T., Flechner S.M., Chiang P.-H.

Embase
Annals of Surgical Oncology. 21 (11) (pp 3691-3697), 2014. Date of Publication: 01 Oct 2014.
[Article]
AN: 53239264
Background: To evaluate the effect and safety of laparoscopy-assisted renal autotransplantation treatment for primary ureteral cancer (PUC). Methods: Medical records of patients undergoing hand-assisted retroperitoneoscopic nephroureterectomy-extracorporeal total ureterectomy-renal autotransplantation-pyelocystostomy (Lap AutoTx) were analyzed. Demographic, intraoperative, and postoperative data were assessed. Results: Fifteen patients diagnosed with PUC underwent this novel approach. Three kidneys were abandoned owing to the detection of residual cancer on the renal pelvic junction, surgeon's judgment on three severe atherosclerotic arteries, and palpable pelvic lymph nodes proven to be evidence of metastatic disease by frozen section analysis. Twelve patients (mean +/- SD age 67.5 +/- 7.5 years) were treated with Lap AutoTx for PUC successfully. No perioperative mortality occurred. One patient with solitary kidney experienced delayed graft function that required short-term hemodialysis. Three recurrent superficial diseases in three patients were treated with transurethral resection. The mean +/- SD follow-up duration was 12.1 +/- 6.7 months (range 3-24 months). The renal pelvicaliceal system was easily examined by flexible cystoscopy. Conclusions: Lap AutoTx is less invasive compared with the traditional two-incisional manner and can be performed safely even among elderly patients. Compared with other currently used therapies, this novel treatment can be used to successfully treat PUC with the added advantages of total resection of the ureteral lesion, preservation of the renal function, and simplification of follow-up procedures. Copyright © 2014, Society of Surgical Oncology.

PMID

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Publisher
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20160217

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2014
Effect of left atrial and ventricular abnormalities on renal transplant recipient outcome-a single-center study.


Embase

[Article]
AN: 612294168

Background: Premature cardiovascular (CV) death is the commonest cause of death in renal transplant recipients. Abnormalities of left ventricular (LV) structure (collectively termed uremic cardiomyopathy) and left atrial (LA) dilation, a marker of fluid status and diastolic function, are risk factors for reduced survival in patients with end stage renal disease (ESRD). In the present analysis, we studied the impact of pre-transplant LA and LV abnormalities on survival after successful renal transplantation (RT). Methods: One hundred nineteen renal transplant recipients (first transplant, deceased donors) underwent cardiovascular MRI (CMR) as part of CV screening prior to inclusion on the waiting list. Data regarding transplant function and patient survival after transplantation were collected. Results: Median post-transplant follow-up was 4.3 years (interquartile range (IQR) 1.9, 6.2). During the post-transplant period, 13 patients returned to dialysis after graft failure and 23 patients died with a functioning graft. Survival analyses, censoring for patients returning to dialysis, showed that pre-transplant LV hypertrophy and elevated LA volume were significantly associated with reduced survival after transplantation. Multivariate Cox regression analyses demonstrated that longer waiting time, poorer transplant function, presence of LV hypertrophy and higher LA volume on screening CMR and female sex were independent predictors of death in patients with a functioning transplant. Conclusions: Presence of LVH and higher LA volume are significant, independent predictors of death in patients who are wait-listed and proceed with renal transplantation. Copyright © 2014 Patel et al.

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533.
Novel aspects of atypical haemolytic uraemic syndrome and the role of eculizumab.
Verhave J.C., Wetzels J.F.M., Van De Kar N.C.A.J.
Embase
[Review]
AN: 612086449
The haemolytic uraemic syndrome (HUS) is part of a spectrum of thrombotic microangiopathies. The most common etiologies of HUS are the ones seen in childhood caused by an infection of Shiga toxin-producing Escherichia coli, HUS caused by an infection with Streptococcus pneumoniae and HUS due to abnormalities in the alternative pathway of the complement system. In the past decade, enormous progress has been made in understanding the pathogenesis in the latter group of patients. The analysis of genes that encode for complement regulatory proteins and the development of assays for measuring the activity of ADAMTS13 and the detection of antibodies against factor H contributed significantly to the diagnostic tools in patients with HUS. These assays have made it possible to clearly differentiate between thrombotic thrombocytopenic purpura and various forms of HUS. With the introduction of eculizumab, a monoclonal anti-C5 inhibitor, in the clinical arena as effective treatment of most complement-mediated forms of HUS, a new era of treatment in HUS has begun. We review the recent advances in HUS, with the focus on treatment. We discuss unsolved questions, which should be addressed in future studies.
Copyright © The Author 2014. Published by Oxford University Press on behalf of ERA-EDTA. All rights reserved.
534.
Transvaginal route for kidney extraction in laparoscopic donor nephrectomy.
Gurluler E., Berber I., Cakir U., Gurkan A.
Embase
JSLS : Journal of the Society of Laparoendoscopic Surgeons / Society of Laparoendoscopic Surgeons. 18 (3) (no pagination), 2014. Date of Publication: 01 Jul 2014.
[Article]
AN: 613277495
BACKGROUND AND OBJECTIVES: The aim of this retrospective study was to compare conventional laparoscopic living-donor nephrectomy with transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy in terms of feasibility and reproducibility. METHODS: A total of 115 consecutive female patients who underwent laparoscopic living-donor nephrectomy (n=70) or transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy (n=45) were included and compared in terms of operative characteristics, as well as donor and recipient outcomes. RESULTS: No significant difference was observed between the laparoscopic living-donor nephrectomy and transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy groups in terms of mean duration of warm and cold ischemia, operation time,
length of hospital stay, arterial anastomoses, visual analog scale pain scores, serum creatinine levels, and receiver outcomes, whereas a significantly higher number of venous anastomoses was noted in the laparoscopic living-donor nephrectomy group than in the transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy group (P=.029).

CONCLUSIONS: Transvaginal natural orifice transluminal endoscopic surgery-assisted living-donor nephrectomy seems to be a feasible and reproducible alternative to conventional laparoscopic living-donor nephrectomy in female donors provided the viability of the vagina as an organ retrieval route.


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Year of Publication 2014

535.
Native ureteropyelostomy in the treatment of obstructive uropathy in adult renal transplant. Experience and technical alternatives.
Trilla E., Lorente D., Salvador C., Planas J., Placer J., Celma A., Cantarell C., Moreso F., Seron D., Morote J.
Embase
[Article]
AN: 612200238
OBJECTIVE: To analyze and evaluate our experience in surgical treatment with the open approach of the complex ureteral stenosis after adult kidney transplantation in a tertiary level hospital in the last seven years. We have reviewed the different surgical options used.
PATIENTS AND METHODS: A total of 589 consecutive adult renal transplants were performed
from January 2005 to December 2012. Of these, 1.1% showed some degree of symptomatic obstructive uropathy which after initial urinary diversion required open surgical approach using the ipsilateral or contralateral native urinary tract. Characteristics of the patient, clinical examinations performed and surgical technique performed as well as their results are presented.

RESULTS: During the period under review, in 5 men and 2 women who had ureteral stenoses after renal transplant, 7 reparative surgeries were performed by open ureteropyelostomy, using ipsilateral native ureter in 6 cases and contralateral ureter in the remaining case. In one case, uretero-calyceal anastomosis was performed due to severe pyelic shrinkage. There were no significant complications. Native kidney nephrectomy was not required for further complications. All the patients operated on had optimum plasma creatinine levels with resolution of previous dilatation.

CONCLUSIONS: The initial percutaneous nephrostomy followed by open surgical repair using native ureter represents a definitive, valid and optimal alternative in terms of safety and preservation of renal function.

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Management of hemolytic uremic syndrome.
Loirat C., Saland J., Bitzan M.

Embase
Presse Medicale. 41 (3 PART 2) (pp e115-e135), 2012. Date of Publication: March 2012.
[Short Survey]
AN: 51830329

2011 has been a special year for hemolytic uremic syndrome (HUS): on the one hand, the dramatic epidemic of Shiga toxin producing E. coli - associated HUS in Germany brought the disease to the attention of the general population, on the other hand it has been the year when eculizumab, the first complement blocker available for clinical practice, was demonstrated as the potential new standard of care for atypical HUS. Here we review the therapeutic options presently available for the various forms of hemolytic uremic syndrome and show how recent knowledge has changed the therapeutic approach and prognosis of atypical HUS. © 2011 Elsevier Masson SAS.


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Publisher
Elsevier Masson SAS (62 rue Camille Desmoulins, Issy les Moulineaux Cedex 92442, France)
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An automatic method for renal cortex segmentation on CT images: evaluation on kidney donors.
Chen X., Summers R.M., Cho M., Bagci U., Yao J.
Embase
Academic radiology. 19 (5) (pp 562-570), 2012. Date of Publication: 01 May 2012.
[Article]
AN: 1051864252

RATIONALE AND OBJECTIVES: The aims of this study were to develop and validate an automated method to segment the renal cortex on contrast-enhanced abdominal computed tomographic images from kidney donors and to track cortex volume change after donation.

MATERIALS AND METHODS: A three-dimensional fully automated renal cortex segmentation method was developed and validated on 37 arterial phase computed tomographic data sets (27 patients, 10 of whom underwent two computed tomographic scans before and after nephrectomy) using leave-one-out strategy. Two expert interpreters manually segmented the cortex slice by slice, and linear regression analysis and Bland-Altman plots were used to compare automated and manual segmentation. The true-positive and false-positive volume fractions were also calculated to evaluate the accuracy of the proposed method. Cortex volume changes in 10 subjects were also calculated.

RESULTS: The linear regression analysis results showed that the automated and manual segmentation methods had strong correlations, with Pearson's correlations of 0.9529, 0.9309, 0.9283, and 0.9124 between intraobserver variation, interobserver variation, automated and user 1, and automated and user 2, respectively (P < .001 for all analyses). The Bland-Altman plots for cortex segmentation also showed that the automated and manual methods had agreeable segmentation. The mean volume increase of the cortex for the 10 subjects was 35.1 +/- 13.2% (P < .01 by paired t test). The overall true-positive and false-positive volume fractions for cortex segmentation were 90.15 +/- 3.11% and 0.85 +/- 0.05%. With the proposed automated method, the time for cortex segmentation was reduced from 20 minutes for manual segmentation to 2 minutes.
CONCLUSIONS: The proposed method was accurate and efficient and can replace the current subjective and time-consuming manual procedure. The computer measurement confirms the volume of renal cortex increases after kidney donation.

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2012

538.
Long-term (5 years) efficacy and safety of pancreas transplantation alone in type 1 diabetic patients.


Embase
Transplantation. 93 (8) (pp 842-846), 2012. Date of Publication: 27 Apr 2012.

[Article]
AN: 51852145

BACKGROUND. Although combined pancreas and kidney transplantation is an established procedure for the treatment of type 1 diabetes (T1D) in patients with end-stage renal disease, the role of pancreas transplant alone (PTA) in the therapy of T1D subjects with preserved kidney function is still matter of debate. METHODS. We report our single-center experience of PTA in 71 consecutive T1D patients all with a posttransplant follow-up of 5 years. Patient and pancreas (normoglycemia in the absence of any antidiabetic therapy) survivals were determined, and several clinical parameters (including risk factors for cardiovascular diseases) were assessed. Cardiac evaluation and Doppler echocardiographic examination were also performed, and renal function and proteinuria were evaluated. RESULTS. Actual patient and pancreas survivals at 5
years were 98.6% and 73.2%, respectively. Relaparotomy was needed in 18.3% of cases. Restoration of endogenous insulin secretion was accompanied by sustained normalization of fasting plasma glucose concentrations and HbA1c levels as well as significant improvement of total cholesterol, low-density lipoprotein-cholesterol, and blood pressure. An improvement of left ventricular ejection fraction was also observed. Proteinuria (24 hours) decreased significantly after transplantation. One patient developed end-stage renal disease. In the 51 patients with sustained pancreas graft function, kidney function (serum creatinine and glomerular filtration rate) decreased over time with a slower decline in recipients with pretransplant glomerular filtration rate less than 90 mL/min. CONCLUSIONS. PTA was an effective and reasonably safe procedure in this single-center cohort of T1D patients. © 2012 Lippincott Williams & Wilkins, Inc.
Acute kidney injury (AKI) is common in cirrhotic patients with ascites. Although not the primary etiology of AKI in cirrhotic patients, hepatorenal syndrome (HRS) is a unique form of AKI that develops only in cirrhotic patients. Intense renal vasoconstriction is the hallmark of HRS. Different mechanisms contribute to renal vasoconstriction, with splanchnic vasodilatation and reduced effective blood volume playing a central role. Diagnostic criteria for HRS have been developed and were recently modified, but diagnosing HRS and differentiating it from other causes of AKI in cirrhotic patients continues to be a difficult task in some patients. Given its overall dismal prognosis, strategies to prevent HRS have been developed and proved to be effective in reducing HRS prevalence among cirrhotic patients. Liver transplantation is the ultimate treatment, but more than one treatment modality can be utilized as a bridge to transplantation. This review provides an update on our current understanding of HRS with emphasis on the underlying pathophysiological mechanisms involved, difficulties in diagnosis, and different treatment modalities. © 2012 by Thieme Medical Publishers, Inc.
Marchal C., Coche E., Goffin E., Dragean A., Schlieper G., Nguyen P., Floege J., Kanaan N., Devuyst O., Jadoul M.

Embase

American Journal of Kidney Diseases. 59 (2) (pp 258-269), 2012. Date of Publication: February 2012.

[Article]

AN: 51632720

Background: Vascular calcification independently predicts cardiovascular disease, the major cause of death in kidney transplant recipients (KTRs). Longitudinal studies of vascular calcification in KTRs are few and small and have short follow-up. We assessed the evolution of coronary artery (CAC) and thoracic aorta calcification and their determinants in a cohort of prevalent KTRs. Study Design: Longitudinal. Setting & Participants: The Agatston score of coronary arteries and thoracic aorta was measured by 16-slice spiral computed tomography in 281 KTRs. Predictors: Demographic, clinical, and biochemical parameters were recorded simultaneously. Outcomes & Measurements: The Agatston score was measured again 3.5 or more years later. Results: Repeated analyzable computed tomographic scans were available for 197 (70%) KTRs after 4.40 +/- 0.28 years; they were not available for the rest of patients because of death (n = 40), atrial fibrillation (n = 1), other arrhythmias (n = 4), refusal (n = 35), or technical problems precluding confident calcium scoring (n = 4). CAC and aorta calcification scores increased significantly (by a median of 11% and 4% per year, respectively) during follow-up. By multivariable linear regression, higher baseline CAC score, history of cardiovascular event, use of a statin, and lower 25-hydroxyvitamin D3 level were independent determinants of CAC progression. Independent determinants of aorta calcification progression were higher baseline aorta calcification score, higher pulse pressure, use of a statin, older age, higher serum phosphate level, use of aspirin, and male sex. Significant regression of CAC or aorta calcification was not observed in this cohort. Limitations: Cohort of prevalent KTRs with potential survival bias; few patients with diabetes and nonwhites, limiting the generalizability of results. Conclusion: In contrast to previous small short-term studies, we show that vascular calcification progression is substantial within 4 years in prevalent KTRs and is associated with several traditional and nontraditional cardiovascular risk factors, some of which are modifiable. © 2012 National Kidney Foundation, Inc.

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With over 80,000 patients in the United States awaiting kidney transplantation, renal transplant surgery continues to evolve with attractive surgical options for living donation, which include laparoscopic donor nephrectomy (LDN) and robotic-assisted laparoscopic donor nephrectomy (RALDN). LDN is currently accepted as the gold standard procedure for living donor nephrectomy; RALDN is an evolving technique and may emerge as a preferred procedure over time. We present our initial experience with RALDN from December 2007 to August 2008. Thirty-five patients who underwent RALND were retrospectively analyzed and compared with 35 age- and time (year)-matched patients who underwent LDN. The parameters analyzed were length of hospital stay (3.2 +/- 0.9 days, P < 0.59), estimated blood loss (146 +/- 363 ml, P < 0.36), operating time (149 +/- 44 min, P < 0.23), cold ischemic time (135 +/- 202 min, P < 0.19), preoperative creatinine (0.82 +/- 0.26 mg/dl, P < 0.46) and postoperative creatinine (1.44 +/- 1.03 mg/dl, P < 0.20). There was no statistical difference between RALDN patients with single renal artery (n = 27) and those with more than one renal artery (n = 8) kidneys. There was one serious complication requiring conversion to open laparotomy to control a bleeding renal artery stump.
following extraction of the kidney. One-year graft survival for the 35 recipients of RALDN was 97.1%. RALDN is feasible and compares favorably to the standard LDN procedure with good graft survival. Robotic-assisted transplant surgery is an emerging technique with potential benefits to both surgeon and patient.

Status
PubMed-not-MEDLINE
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Date Created
20160917
Year of Publication
2011

542.
Delayed graft function in the kidney transplant.
Siedlecki A., Irish W., Brennan D.C.
Embase
Acute kidney injury occurs with kidney transplantation and too frequently progresses to the clinical diagnosis of delayed graft function (DGF). Poor kidney function in the first week of graft life is detrimental to the longevity of the allograft. Challenges to understand the root cause of DGF include several pathologic contributors derived from the donor (ischemic injury, inflammatory signaling) and recipient (reperfusion injury, the innate immune response and the adaptive immune response). Progressive demand for renal allografts has generated new organ categories that continue to carry high risk for DGF for deceased donor organ transplantation. New therapies seek to subdue the inflammatory response in organs with high likelihood to benefit from intervention. Future success in suppressing the development of DGF will require a concerted effort to anticipate and treat tissue injury throughout the arc of the transplantation process. © Copyright 2011 The American Society of Transplantation.

Comparison between laparoscopic and subcostal mini-incision for live donor nephrectomy.
Kanashiro H; Lopes RI; Saito FA; Mitre AI; Denes FT; Chambo JL; Falci R Jr; Piovesan AC; David Neto E; Nahas WC.
OBJECTIVES: The aim of this study was to compare the results of laparoscopic donor nephrectomy with open donor nephrectomy.

METHODS: A non-randomized prospective analysis was conducted of living donor kidney transplantations (118 open donor nephrectomies; 57 laparoscopic donor nephrectomies) between January 2005 and December 2007 in the Kidney Transplantation Unit of Hospital das Clinicas of Faculdade de Medicina of the Universidade de Sao Paulo.

RESULTS: Mean donor operative time, mean donor hospital stay, mean postoperative creatinine values, and rates of complications and graft survival were similar for both groups. A significant statistical difference in warm ischemia time was observed between the open donor nephrectomy and laparoscopic donor nephrectomy groups (p < 0.001). There was only one conversion in the laparoscopic donor nephrectomy group.

CONCLUSIONS: Laparoscopic donor nephrectomy is a safe procedure for a donor nephrectomy, comparable to an open procedure with similar results despite a longer warm ischemia time.
Donor DNA is detected in recipient blood for years after kidney transplantation using sensitive forensic medicine methods.


[Article]
AN: 610467235

Background: Transplanted vascularized organs shed passenger cells, normal constituents of whole organs, that migrate to recipient lymphoid tissues and produce microchimerism. These cells lysed by recipient cytotoxic cells release cellular organelles into the recipient circulation. In addition, warm and cold ischemia as well as immune rejection of the transplanted organ or tissue bring about destructive changes in the graft parenchymatous cells. The knowledge of the fate of donor DNA distributed in passenger cells and in fragments of disrupted nuclei as well as the role of recipient cells internalizing donor DNA could give some insight into the mechanism of graft destruction and immunization or tolerance to donor antigens. Material/Methods: In this study we provide evidence that forensic medicine testing of polymorphic genes for phospholipase A2, cytochrome P450 and locus D1S80 may be useful for the detection of donor DNA microchimerism in kidney transplant recipients in sex-matched combinations as well as previous
blood transfusion recipients. Results: Donor DNA was detected in recipient whole blood even 2 years after kidney transplantation. Conclusions: The biological significance of our findings is not clear. We speculate that donor DNA fragments in recipient immune cells may play a role in the immunization/tolerance process to allogeneic antigens. Copyright © Ann Transplant, 2007.

PMID

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Publisher
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545.
Dipeptidyl-peptidase (DPP)-4 inhibitors and glucagon-like peptide (GLP)-1 analogues for prevention or delay of type 2 diabetes mellitus and its associated complications in people at increased risk for the development of type 2 diabetes mellitus
Hemmingsen, Bianca. Sonne, David P. Metzendorf, Maria-Inti. Richter, Bernd.Institution Bianca Hemmingsen .TI Dipeptidyl-peptidase (DPP)-4 inhibitors and glucagon-like peptide (GLP)-1 analogues for prevention or delay of type 2 diabetes mellitus and its associated complications in people at increased risk for the development of type 2 diabetes mellitus.
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 5, 2017. [Systematic Review]
AN: 00075320-100000000-10597
Background
The projected rise in the incidence of type 2 diabetes mellitus (T2DM) could develop into a substantial health problem worldwide. Whether dipeptidyl-peptidase (DPP)-4 inhibitors or glucagon-like peptide (GLP)-1 analogues are able to prevent or delay T2DM and its associated complications in people at risk for the development of T2DM is unknown.

Objectives
To assess the effects of DPP-4 inhibitors and GLP-1 analogues on the prevention or delay of T2DM and its associated complications in people with impaired glucose tolerance, impaired fasting blood glucose, moderately elevated glycosylated haemoglobin A1c (HbA1c) or any combination of these.

Search methods
We searched the Cochrane Central Register of Controlled Trials; MEDLINE; PubMed; Embase; ClinicalTrials.gov; the World Health Organization (WHO) International Clinical Trials Registry Platform; and the reference lists of systematic reviews, articles and health technology assessment reports. We asked investigators of the included trials for information about additional trials. The date of the last search of all databases was January 2017.

Selection criteria
We included randomised controlled trials (RCTs) with a duration of 12 weeks or more comparing DPP-4 inhibitors and GLP-1 analogues with any pharmacological glucose-lowering intervention, behaviour-changing intervention, placebo or no intervention in people with impaired fasting glucose, impaired glucose tolerance, moderately elevated HbA1c or combinations of these.

Data collection and analysis
Two review authors read all abstracts and full-text articles and records, assessed quality and extracted outcome data independently. One review author extracted data which were checked by a second review author. We resolved discrepancies by consensus or the involvement of a third review author. For meta-analyses, we planned to use a random-effects model with investigation of risk ratios (RRs) for dichotomous outcomes and mean differences (MDs) for continuous outcomes, using 95% confidence intervals (CIs) for effect estimates. We assessed the overall quality of the evidence using the GRADE instrument.

Main results
We included seven completed RCTs; about 98 participants were randomised to a DPP-4 inhibitor as monotherapy and 1620 participants were randomised to a GLP-1 analogue as monotherapy. Two trials investigated a DPP-4 inhibitor and five trials investigated a GLP-1 analogue. A total of 924 participants with data on allocation to control groups were randomised to a comparator group; 889 participants were randomised to placebo and 33 participants to metformin monotherapy. One RCT of liraglutide contributed 85% of all participants. The duration of the intervention varied from 12 weeks to 160 weeks. We judged none of the included trials at low risk.
of bias for all 'Risk of bias' domains and did not perform meta-analyses because there were not enough trials.

Authors' conclusions
There is no firm evidence that DPP-4 inhibitors or GLP-1 analogues compared mainly with placebo substantially influence the risk of T2DM and especially its associated complications in people at increased risk for the development of T2DM. Most trials did not investigate patient-important outcomes.

546.
Anti-sclerostin antibodies for the treatment of osteoporosis
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 4, 2017.
[Protocol]
AN: 00075320-100000000-11042
This is a protocol for a Cochrane Review (Intervention). The objectives are as follows: To assess the benefits and harms of anti-sclerostin antibodies for the treatment of osteoporosis.

547.
Management of people with intermediate-stage hepatocellular carcinoma
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 4, 2017.
[Systematic Review]
AN: 00075320-100000000-10037
Background
There is significant uncertainty in the treatment of intermediate-stage hepatocellular carcinoma which is defined by the Barcelona Clinic Liver Cancer (BCLC) as hepatocellular carcinoma stage B with large, multi-nodular, Child-Pugh status A to B, performance status 0 to 2, and without vascular occlusion or extrahepatic disease.

Objectives
To assess the comparative benefits and harms of different interventions used in the treatment of intermediate-stage hepatocellular carcinoma (BCLC stage B) through a network meta-analysis and to generate rankings of the available interventions according to their safety and efficacy.

However, we found only one comparison. Therefore, we did not perform the network meta-analysis, and we assessed the comparative benefits and harms of different interventions versus each other, or versus placebo, sham, or no intervention (supportive treatment only) using standard Cochrane methodology.

Search methods
We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, Embase, Science Citation Index Expanded, World Health Organization International Clinical Trials Registry Platform, and randomised clinical trials registers to September 2016 to identify randomised clinical trials on hepatocellular carcinoma.

Selection criteria
We included only randomised clinical trials, irrespective of language, blinding, or publication status, in participants with intermediate-stage hepatocellular carcinoma, irrespective of the presence of cirrhosis, size, or number of the tumours (provided they met the criteria of intermediate-stage hepatocellular carcinoma), of presence or absence of portal hypertension, of aetiology of hepatocellular carcinoma, and of the future remnant liver volume. We excluded trials which included participants who had previously undergone liver transplantation. We considered any of the various interventions compared with each other or with no active intervention (supportive treatment only). We excluded trials which compared variations of the same intervention: for example, different methods of performing transarterial chemoembolisation.

Data collection and analysis
We used standard methodological procedures expected by Cochrane. We calculated the hazard ratio (HR) with 95% confidence intervals (CI) using both fixed-effect and random-effects models based on available-participant analysis with Review Manager. We assessed risk of bias according to Cochrane, controlled risk of random errors with Trial Sequential Analysis using Stata, and assessed the quality of the evidence using GRADE.

Main results
Three randomised clinical trials, including 430 participants, met the inclusion criteria for this review; however, data from two trials with 412 participants could be included in only one primary outcome (i.e. mortality). All three trials were at high risk of bias. All three trials included supportive
care as cointervention. The comparisons included in the two trials reporting on mortality were: systemic chemotherapy with sorafenib versus no active intervention; and transarterial chemoembolisation plus systemic chemotherapy with sorafenib versus transarterial chemoembolisation alone. The trials did not report the duration of follow-up; however, it appeared that the participants were followed up for a period of about 18 to 30 months. The majority of the participants in the trials had cirrhotic livers. The trials included participants with intermediate-stage hepatocellular carcinoma arising from viral and non-viral aetiologies. The trials did not report the portal hypertension status of the participants. The mortality was 50% to 70% over a median follow-up period of 18 to 30 months. There was no evidence of difference in mortality at maximal follow-up between systemic chemotherapy versus no chemotherapy (hazard ratio 0.85, 95% CI 0.60 to 1.18; participants = 412; studies = 2; I²(superscript 2) = 0%; very low quality evidence). A subgroup analysis performed by stratifying the analysis by the presence or absence of transarterial chemoembolisation as cointervention did not alter the results. None of the trials reported on serious adverse events other than mortality, health-related quality of life, recurrence of hepatocellular carcinoma, or length of hospital stay. One of the trials providing data was funded by the pharmaceutical industry, the other did not report the source of funding, and the trial with no data for the review was also funded by the pharmaceutical industry. We found two ongoing trials.

Authors’ conclusions
Currently, there is no evidence from randomised clinical trials that people with intermediate-stage hepatocellular carcinoma would benefit from systemic chemotherapy with sorafenib either alone or when transarterial chemoembolisation was used as a cointervention (very low quality evidence). We need high-quality randomised clinical trials designed to measure differences in clinically important outcomes (e.g. all-cause mortality or health-related quality of life).
Background
Hepatocellular carcinoma (primary liver cancer) is classified in many ways. The Barcelona Clinic Liver Cancer (BCLC) group staging classifies the cancer based on patient's life expectancy. People with very early- or early-stage hepatocellular carcinoma have single tumour or three tumours of maximum diameter of 3 cm or less, Child-Pugh status A to B, and performance status 0 (fully functional). Management of hepatocellular carcinoma is uncertain.

Objectives
To assess the comparative benefits and harms of different interventions used in the treatment of early or very early hepatocellular carcinoma through a network meta-analysis and to generate rankings of the available interventions according to their safety and efficacy. However, it was not possible to assess whether the potential effect modifiers were similar across different comparisons. Therefore, we did not perform the network meta-analysis and instead assessed the benefits and harms of different interventions versus each other or versus sham or no intervention using standard Cochrane methodology.

Search methods
We searched CENTRAL, MEDLINE, Embase, Science Citation Index Expanded, and trials registers to September 2016 to identify randomised clinical trials (RCTs) on hepatocellular carcinoma.

Selection criteria
We included only RCTs, irrespective of language, blinding, or publication status, in participants with very early- or early-stage hepatocellular carcinoma, irrespective of the presence of cirrhosis, portal hypertension, aetiology of hepatocellular carcinoma, size and number of the tumours, and future remnant liver volume. We excluded trials including participants who were previously liver transplanted. We considered interventions compared with each other, sham, or no intervention.

Data collection and analysis
We calculated the odds ratio, mean difference, rate ratio, or hazard ratio with 95% confidence intervals using both fixed-effect and random-effects models based on available-participant analysis with Review Manager 5. We assessed the risk of bias according to Cochrane, controlled risk of random errors with Trial Sequential Analysis using Stata, and the quality of the evidence using GRADE.

Main results
Eighteen trials met the inclusion criteria for this review. Four trials (593 participants; 574 participants included for one or more analyses) compared surgery versus radiofrequency ablation in people with early hepatocellular carcinoma, eligible to undergo surgery. Fourteen trials (2533 participants; 2494 participants included for various analyses) compared different non-surgical interventions in people with early hepatocellular carcinoma, not eligible to undergo surgery. Overall, the quality of evidence was low or very low for all outcomes for both comparisons.
Authors’ conclusions
The evidence was of low or very low quality. There was no evidence of a difference in all-cause mortality at maximal follow-up between surgery and radiofrequency ablation in people eligible for surgery. All-cause mortality at maximal follow-up was higher with percutaneous acetic acid injection and percutaneous alcohol injection than with radiofrequency ablation in people not eligible for surgery. There was no evidence of a difference in all-cause mortality at maximal follow-up for the other comparisons. High-quality RCTs designed to assess clinically important differences in all-cause mortality and health-related quality of life, and having an adequate follow-up period (approximately five years) are needed.

549.
Maintenance immunosuppression for adults undergoing liver transplantation: a network meta-analysis

Background
As part of liver transplantation, immunosuppression (suppressing the host immunity) is given to prevent graft rejections resulting from the immune response of the body against transplanted organ or tissues from a different person whose tissue antigens are not compatible with those of the recipient. The optimal maintenance immunosuppressive regimen after liver transplantation remains uncertain.

Objectives
To assess the comparative benefits and harms of different maintenance immunosuppressive regimens in adults undergoing liver transplantation through a network meta-analysis and to generate rankings of the different immunosuppressive regimens according to their safety and efficacy.

Search methods
We searched CENTRAL, MEDLINE, Embase, Science Citation Index Expanded, World Health Organization International Clinical Trials Registry Platform, and trials registers until October 2016 to identify randomised clinical trials on immunosuppression for liver transplantation.

Selection criteria
We included only randomised clinical trials (irrespective of language, blinding, or publication status) in adult participants undergoing liver transplantation (or liver retransplantation) for any reason. We excluded trials in which participants had undergone multivisceral transplantation or participants with established graft rejections. We considered any of the various maintenance immunosuppressive regimens compared with each other.

Data collection and analysis
We performed a network meta-analysis with OpenBUGS using Bayesian methods and calculated the odds ratio, rate ratio, and hazard ratio (HR) with 95% credible intervals (CrI) based on an available-case analysis, according to National Institute of Health and Care Excellence Decision Support Unit guidance.

Main results
We included a total of 26 trials (3842 participants) in the review, and 23 trials (3693 participants) were included in one or more outcomes in the review. The vast majority of the participants underwent primary liver transplantation. All of the trials were at high risk of bias, and all of the evidence was of low or very low quality. In addition, because of sparse data involving trials at high risk of bias, it is not possible to entirely rely on the results of the network meta-analysis. The trials included mainly participants undergoing primary liver transplantation of varied aetiologies. The follow-up in the trials ranged from 3 to 144 months. The most common maintenance immunosuppression used as a control was tacrolimus. There was no evidence of difference in mortality (21 trials; 3492 participants) or graft loss (15 trials; 2961 participants) at maximal follow-up between the different maintenance immunosuppressive regimens based on the network meta-analysis. In the direct comparison, based on a single trial including 222 participants, tacrolimus plus sirolimus had increased mortality (HR 2.76, 95% CrI 1.30 to 6.69) and graft loss (HR 2.34, 95% CrI 1.28 to 4.61) at maximal follow-up compared with tacrolimus. There was no evidence of differences in the proportion of people with serious adverse events (1 trial; 719 participants), proportion of people with any adverse events (2 trials; 940 participants), renal impairment (8 trials; 2233 participants), chronic kidney disease (1 trial; 100 participants), graft rejections (any) (16 trials; 2726 participants), and graft rejections requiring treatment (5 trials; 1025 participants) between the different immunosuppressive regimens. The network meta-analysis showed that the number of adverse events was lower with cyclosporine A than with many other immunosuppressive regimens (12 trials; 1748 participants), and the risk of retransplantation (13 trials; 1994 participants) was higher with cyclosporine A than with tacrolimus (HR 3.08, 95% CrI
1.13 to 9.90). None of the trials reported number of serious adverse events, health-related quality of life, or costs.

Authors’ conclusions
Based on low-quality evidence from a single small trial from direct comparison, tacrolimus plus sirolimus increases mortality and graft loss at maximal follow-up compared with tacrolimus. Based on very low-quality evidence from network meta-analysis, we found no evidence of difference between different immunosuppressive regimens. We found very low-quality evidence from network meta-analysis and low-quality evidence from direct comparison that cyclosporine A causes more retransplantation compared with tacrolimus. Future randomised clinical trials should be adequately powered; performed in people who are generally seen in the clinic rather than in highly selected participants; employ blinding; avoid postrandomisation dropouts or planned cross-overs; and use clinically important outcomes such as mortality, graft loss, renal impairment, chronic kidney disease, and retransplantation. Such trials should use tacrolimus as one of the control groups. Moreover, such trials ought to be designed in such a way as to ensure low risk of bias and low risks of random errors.

550.
Tubeless versus tubed percutaneous nephrolithotomy for treating kidney stones
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 3, 2017.
[Protocol]
AN: 00075320-100000000-11016
This is a protocol for a Cochrane Review (Intervention). The objectives are as follows:
To assess the effects and efficacy of tubeless mini percutaneous nephrolithotomy versus standard percutaneous nephrolithotomy for the treatment of renal stones in adults.
Ischaemic preconditioning for the reduction of renal ischaemia reperfusion injury
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 3, 2017.
[Systematic Review]
AN: 00075320-100000000-09137

Background
Ischaemia reperfusion injury can lead to kidney dysfunction or failure. Ischaemic preconditioning is a short period of deprivation of blood supply to particular organs or tissue, followed by a period of reperfusion. It has the potential to protect kidneys from ischaemia reperfusion injury.

Objectives
This review aimed to look at the benefits and harms of local and remote ischaemic preconditioning to reduce ischaemia and reperfusion injury among people with renal ischaemia reperfusion injury.

Search methods
We searched Cochrane Kidney and Transplant's Specialised Register to 5 August 2016 through contact with the Information Specialist using search terms relevant to this review.

Selection criteria
We included all randomised controlled trials measuring kidney function and the role of ischaemic preconditioning in patients undergoing a surgical intervention that induces kidney injury. Kidney transplantation studies were excluded.

Data collection and analysis
Studies were assessed for eligibility and quality; data were extracted by two independent authors. We collected basic study characteristics: type of surgery, remote ischaemic preconditioning protocol, type of anaesthesia. We collected primary outcome measurements: serum creatinine and adverse effects to remote ischaemic preconditioning and secondary outcome measurements: acute kidney injury, need for dialysis, neutrophil gelatinase-associated lipocalin, hospital stay and mortality. Summary estimates of effect were obtained using a random-effects model, and results were expressed as risk ratios (RR) and their 95% confidence intervals (CI) for dichotomous outcomes, and mean difference (MD) and 95% CI for continuous outcomes.

Main results
We included 28 studies which randomised a total of 6851 patients. Risk of bias assessment indicated unclear to low risk of bias for most studies. For consistency regarding the direction of effects, continuous outcomes with negative values, and dichotomous outcomes with values less
than one favour remote ischaemic preconditioning. Based on high quality evidence, remote ischaemic preconditioning made little or no difference to the reduction of serum creatinine levels at postoperative days one (14 studies, 1022 participants: MD -0.02 mg/dL, 95% CI -0.05 to 0.02; I\(^2\) = 21%), two (9 studies, 770 participants: MD -0.04 mg/dL, 95% CI -0.09 to 0.02; I\(^2\) = 31%), and three (6 studies, 417 participants: MD -0.05 mg/dL, 95% CI -0.19 to 0.10; I\(^2\) = 68%) compared to control.

Authors' conclusions
Remote ischaemic preconditioning by cuff inflation appears to be a safe method, and probably leads to little or no difference in serum creatinine, adverse effects, need for dialysis, length of hospital stay, death and in the incidence of acute kidney injury. Overall we had moderate-high certainty evidence however the available data does not confirm the efficacy of remote ischaemic preconditioning in reducing renal ischaemia reperfusion injury in patients undergoing major cardiac and vascular surgery in which renal ischaemia reperfusion injury may occur.

552.
Remote ischaemic conditioning for preventing and treating ischaemic stroke
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 1, 2017.
[Protocol]
AN: 00075320-100000000-10909
This is a protocol for a Cochrane Review (Intervention). The objectives are as follows:
To assess benefits and harms of RIC in preventing ischaemic stroke and in treating people with ischaemic stroke and those at risk for ischaemic stroke.

553.
Catheter insertion techniques for improving catheter function and clinical outcomes in peritoneal dialysis patients
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 1, 2017.
[Protocol]
AN: 00075320-100000000-10894
This is a protocol for a Cochrane Review (Intervention). The objectives are as follows:
This review aims to look at the benefits and harms of different PD catheter insertion techniques. To establish whether a specific technique used to place catheters in adults and children, who are new to PD, result in any significant differences in clinical outcomes. Insertion techniques will be further defined as peritoneoscopic, percutaneous, fluoroscopic, laparoscopic insertion or open surgery.
To identify which technique offers optimal clinical outcomes and minimises post-procedure complications including postoperative haemorrhage, PD catheter dysfunction, exit site infection/peritonitis and bowel perforation.

554.
Pharmacological interventions for heart failure in people with chronic kidney disease
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 12, 2016.
[Protocol]
AN: 00075320-100000000-10878
This is a protocol for a Cochrane Review (Intervention). The objectives are as follows:
This review aims to look at the benefits and harms of pharmacological interventions for HF (i.e., antihypertensive agents, inotropes and agents that may improve the heart performance indirectly) in people with CKD.
Insulin secretagogues for prevention or delay of type 2 diabetes mellitus and its associated complications in persons at increased risk for the development of type 2 diabetes mellitus

Bianca Hemmingsen .TI Insulin secretagogues for prevention or delay of type 2 diabetes mellitus and its associated complications in persons at increased risk for the development of type 2 diabetes mellitus.

EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 10, 2016.

[Systematic Review]
AN: 00075320-100000000-10549

Background
The projected rise in the incidence of type 2 diabetes mellitus (T2DM) could develop into a substantial health problem worldwide. Whether insulin secretagogues (sulphonylureas and meglitinide analogues) are able to prevent or delay T2DM and its associated complications in people at risk for the development of T2DM is unknown.

Objectives
To assess the effects of insulin secretagogues on the prevention or delay of T2DM and its associated complications in people with impaired glucose tolerance, impaired fasting blood glucose, moderately elevated glycosylated haemoglobin A1c (HbA1c) or any combination of these.

Search methods
We searched the Cochrane Central Register of Controlled Trials, MEDLINE, PubMed, Embase, ClinicalTrials.gov, the World Health Organization International Clinical Trials Registry Platform, and the reference lists of systematic reviews, articles and health technology assessment reports. We asked investigators of the included trials for information about additional trials. The date of the last search of all databases was April 2016.

Selection criteria
We included randomised controlled trials (RCTs) with a duration of 12 weeks or more comparing insulin secretagogues with any pharmacological glucose-lowering intervention, behaviour-changing intervention, placebo or no intervention in people with impaired fasting glucose, impaired glucose tolerance, moderately elevated HbA1c or combinations of these.

Data collection and analysis
Two review authors read all abstracts and full-text articles/records, assessed quality and extracted outcome data independently. One review author extracted data which were checked by a second review author. We resolved discrepancies by consensus or the involvement of a third review author. For meta-analyses we used a random-effects model with investigation of risk ratios (RRs) for dichotomous outcomes and mean differences (MDs) for continuous outcomes, using 95% confidence intervals (CIs) for effect estimates. We carried out trial sequential analyses (TSAs) for all outcomes that could be meta-analysed. We assessed the overall quality of the evidence by using the GRADE instrument.

Main results

We included six RCTs with 10,018 participants; 4791 participants with data on allocation to intervention groups were randomised to a second- or third-generation sulphonylurea or a meglitinide analogue as monotherapy and 29 participants were randomised to a second-generation sulphonylurea plus metformin. Three trials investigated a second-generation sulphonylurea, two trials investigated a third-generation sulphonylurea and one trial a meglitinide analogue. A total of 4873 participants with data on allocation to control groups were randomised to a comparator group; 4820 participants were randomised to placebo, 23 to diet and exercise, and 30 participants to metformin monotherapy. One RCT of nateglinide contributed 95% of all participants. The duration of the intervention varied from six months to five years. We judged none of the included trials as at low risk of bias for all 'Risk of bias' domains.

Authors’ conclusions

There is insufficient evidence to demonstrate whether insulin secretagogues compared mainly with placebo reduce the risk of developing T2DM and its associated complications in people at increased risk for the development of T2DM. Most trials did not investigate patient-important outcomes.

556.

Fish oil for kidney transplant recipients

Lim, KH Andy. Manley, Karen J. Roberts, Matthew A. Fraenkel, Margaret B.Institution Andy KH Lim .TI Fish oil for kidney transplant recipients.

EBM Reviews - Cochrane Database of Systematic Reviews

Cochrane Database of Systematic Reviews. 8, 2016.

[Systematic Review]

AN: 00075320-100000000-04219
Background
Calcineurin inhibitors used in kidney transplantation for immunosuppression have adverse effects that may contribute to nephrotoxicity and increased cardiovascular risk profile. Fish oils are rich in very long chain omega-3 fatty acids, which may reduce nephrotoxicity by improving endothelial function and reduce rejection rates through their immuno-modulatory effects. They may also modify the cardiovascular risk profile. Hence, fish oils may potentially prolong graft survival and reduce cardiovascular mortality.

Objectives
This review aimed to look at the benefits and harms of fish oil treatment in ameliorating the kidney and cardiovascular adverse effects of CNI-based immunosuppressive therapy in kidney transplant recipients.

Search methods
We searched the Cochrane Kidney and Transplant Specialised Register (up to 17 March 2016) through contact with the Information Specialist using search terms relevant to this review.

Selection criteria
All randomised controlled trials (RCTs) and quasi-RCTs of fish oils in kidney transplant recipients on a calcineurin inhibitor-based immunosuppressive regimen. RCTs of fish oil versus statins were included.

Data collection and analysis
Data was extracted and the quality of studies assessed by two authors, with differences resolved by discussion with a third independent author. Dichotomous outcomes were reported as risk ratio (RR) and continuous outcome measures were reported as the mean difference (MD) with 95% confidence intervals using the random effects model. Heterogeneity was assessed using a Chi(superscript 2) test on n-1 degrees of freedom and the I(superscript 2) statistic. Data not suitable for pooling were tabulated and described.

Main results
Fifteen studies (733 patients) were suitable for analysis. All studies were small and had variable methodology. Fish oil did not significantly affect patient or graft survival, acute rejection rates, or calcineurin inhibitor toxicity when compared to placebo. Overall SCr was significantly lower in the fish oil group compared to placebo (5 studies, 237 participants: MD -30.63 [micro]mol/L, 95% CI -59.74 to -1.53; I(superscript 2) = 88%). In the subgroup analysis, this was only significant in the long-course (six months or more) group (4 studies, 157 participants: MD -37.41 [micro]mol/L, 95% CI -69.89 to -4.94; I(superscript 2) = 82%). Fish oil treatment was associated with a lower diastolic blood pressure (4 studies, 200 participants: MD -4.53 mm Hg, 95% CI -7.60 to -1.45) compared to placebo. Patients receiving fish oil for more than six months had a modest increase in HDL (5 studies, 178 participants: MD 0.12 mmol/L, 95% CI 0.03 to 0.21; I(superscript 2) = 47%) compared to placebo. Fish oil effects on lipids were not significantly different from low-dose
statins. There was insufficient data to analyse cardiovascular outcomes. Fishy aftertaste and gastrointestinal upset were common but did not result in significant patient drop-out.

Authors’ conclusions
There is insufficient evidence from currently available RCTs to recommend fish oil therapy to improve kidney function, rejection rates, patient survival or graft survival. The improvements in HDL cholesterol and diastolic blood pressure were too modest to recommend routine use. To determine a benefit in clinical outcomes, future RCTs will need to be adequately powered with these outcomes in mind.

557.
Pharmacological treatment for familial amyloid neuropathy
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 10, 2016.
[Protocol]
AN: 00075320-100000000-10821
This is a protocol for a Cochrane Review (Intervention). The objectives are as follows:
To assess and compare the efficacy, acceptability, and tolerability of pharmacologic disease-modifying agents for familial amyloid neuropathy (FAP).

558.
Graft nephrectomy for people with a failed kidney transplant
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 10, 2016.
This is a protocol for a Cochrane Review (Intervention). The objectives are as follows:
The review aims to look at the immunological and clinical benefits and harms of graft nephrectomy for people with a failed kidney transplant.

559.
Interventions for chronic kidney disease in people with sickle cell disease
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 10, 2016.

This is the protocol for a review and there is no abstract. The objectives are as follows:
To assess the effectiveness of any intervention in preventing or reducing kidney complications or CKD in people with SCD (including red blood cell transfusions, hydroxyurea and ACEI (either alone or in combination with each other)).

560.
Metformin and sulphonylurea (second- or third-generation) combination therapy for adults with type 2 diabetes mellitus
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 9, 2016.
This is the protocol for a review and there is no abstract. The objectives are as follows:
To assess the effects of metformin and sulphonylurea (second- or third-generation) combination therapy for adults with type 2 diabetes mellitus.

561.
Sodium-glucose cotransporter (SGLT) 2 inhibitors for prevention or delay of type 2 diabetes mellitus and its associated complications in people at risk for the development of type 2 diabetes mellitus
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 4, 2016.

Background
Sodium-glucose cotransporter (SGLT) 2 inhibitors were recently approved as glucose-lowering interventions in people with type 2 diabetes mellitus (T2DM). Potential beneficial or harmful effects of SGLT 2 inhibitors in people at risk for the development of T2DM are unknown.

Objectives
To assess the effects of SGLT 2 inhibitors focusing on the prevention or delay of T2DM and its associated complications in people with impaired glucose tolerance, impaired fasting blood glucose or moderately elevated glycosylated haemoglobin A1c (HbA1c) or any combination of these.

Search methods
We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, PubMed, EMBASE, ClinicalTrials.gov, the World Health Organization (WHO) International Clinical Trials Registry Platform (ICTRP) and reference lists of systematic reviews, articles and health technology assessment reports. We asked investigators of ongoing for information about additional trials. The date of the last search of all databases was January 2016.
Selection criteria
Randomised controlled trials (RCTs) of any duration comparing SGLT 2 inhibitors with any glucose-lowering intervention, behaviour-changing intervention, placebo or no intervention in people with impaired fasting glucose, impaired glucose tolerance, moderately elevated HbA1c or combinations of these.

Data collection and analysis
Two review authors read all abstracts, assessed quality and extracted data independently. We resolved discrepancies by consensus or the involvement of a third author.

Main results
We could not include any RCT in this systematic review. One trial was published in two abstracts, but did not provide separate information of the participants with impaired glucose tolerance, impaired fasting glucose or both. We identified two ongoing trials, both evaluating the effects of dapagliflozin (and metformin) in people at risk for the development of type 2 diabetes and a follow-up of 24 to 26 weeks. Both trials will mainly report on surrogate outcome measures with some data on adverse effects and health-related quality of life.

Authors’ conclusions
Due to lack of data it is not possible to conclude whether SGLT 2 inhibitors prevent or delay the diagnosis of T2DM and its associated complications.

562.
Laparoendoscopic single-site donor nephrectomy (LESS-DN) versus standard laparoscopic donor nephrectomy
EBM Reviews - Cochrane Database of Systematic Reviews
Cochrane Database of Systematic Reviews. 6, 2016.
[Systematic Review]
AN: 00075320-100000000-09245

Background
Advances in minimally invasive surgery for live kidney donors have led to the development of laparoendoscopic single site donor nephrectomy (LESS-DN). At present, laparoscopic donor nephrectomy is the technique of choice for donor nephrectomy globally. Compared with open
surgical approaches, laparoscopic donor nephrectomy is associated with decreased morbidity, faster recovery times and return to normal activity, and shorter hospital stays. LESS-DN differs from standard laparoscopic donor nephrectomy; LESS-DN requires a single incision through which the procedure is performed and donor kidney is removed. Previous studies have hypothesised that LESS-DN may provide additional benefits for kidney donors and stimulate increased donor rates.

Objectives
This review looked at the benefits and harms of LESS-DN compared with standard laparoscopic nephrectomy for live kidney donors.

Search methods
We searched the Cochrane Kidney and Transplant's Specialised Register to 28 January 2016 through contact with the Information Specialist using search terms relevant to this review.

Selection criteria
We included randomised controlled trials (RCTs) that compared LESS-DN with laparoscopic donor nephrectomy in adults.

Data collection and analysis
Three authors independently assessed studies for eligibility and conducted risk of bias evaluation. Summary estimates of effect were obtained using a random-effects model and results were expressed as risk ratios (RR) or risk difference (RD) and their 95% confidence intervals (CI) for dichotomous outcomes, and mean difference (MD) and 95% CI for continuous outcomes.

Main results
We included three studies (179 participants) comparing LESS-DN with laparoscopic donor nephrectomy. There were no significant differences between LESS-DN and laparoscopic donor nephrectomy for mean operative time (2 studies, 79 participants: MD 6.36 min, 95% CI -11.85 to 24.57), intra-operative blood loss (2 studies, 79 participants: MD -8.31 mL, 95% CI -23.70 to 7.09), or complication rates (3 studies, 179 participants: RD 0.05, 95% CI -0.04 to 0.14). Pain scores at discharge were significantly less in the LESS-DN group (2 studies, 79 participants: MD -1.19, 95% CI -2.17 to -0.21). For all other outcomes (length of hospital stay; length of time to return to normal activities; blood transfusions; conversion to another form of surgery; warm ischaemia time; total analgesic requirement; graft loss) there were no significant differences observed.

Authors’ conclusions
Given the small number and size of included studies it is uncertain whether LESS-DN is better than laparoscopic donor nephrectomy. Well designed and adequately powered RCTs are needed to better define the role of LESS-DN as a minimally invasive option for kidney donor surgery.