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BENIGN PROSTATIC HYPERPLASIA
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Introduction

This is one of a series of convenient pocket size books (currently 3) offering a comprised version of several EAU guidelines. These short texts are based on the currently available extended guidelines texts and can serve as a quick reference guide for medical professionals.

The EAU considers it to be of paramount importance to continuously update its guidelines texts and introduce new data and the latest versions can be viewed online at http://www.uroweb.nl. All EAU members will automatically receive a printed version.

Board EAU Healthcare Office
March 2003
Benign Prostatic Hyperplasia (BPH) is the most common benign neoplasm in men. BPH is a medical condition closely related to ageing. It is not life threatening, but its clinical manifestation as lower urinary tract symptoms (LUTS) reduces patient’s quality of life. Bothersome LUTS can occur in 30% of men older than 65 years.

The prevalence of clinical BPH remains difficult to determine, and an epidemiological definition of BPH is lacking. The aetiology of BPH is multifactorial, with age and hormonal status being the true factors related to the development of the disease. The need for surgery to treat BPH increases with age and with the degree of clinical symptoms at baseline. Nocturia and changes in the urinary flow stream seem to be the most predictive symptoms.

Diagnosis of BPH
Accurate and early diagnosis of BPH leads to better treatment outcomes and predetermines the treatment choice.

Recommendations for the Diagnosis of BPH
- Among all the different urinary symptom score systems currently available, the use of the I-PSS is recommended because of its world-wide distribution and use.
- In patients undergoing investigation for LUTS, the minimal requirement is to assess the upper urinary tract function by a creatinine measurement and/or an ultrasonographic examination.
- There is consensus that if imaging of the upper urinary tract is performed, ultrasonography is the method of choice.
- Imaging of the upper urinary tract is recommended in patients with LUTS and a:
  * History of or a current urinary tract infection
  * History of urolithiasis
  * History of urinary tract surgery
  * History of urothelial tumour (including IVU)
  * Haematuria (including IVU)
  * Urinary retention
- Routine imaging of the urinary bladder cannot be recommended as a diagnostic test in the workup of patients with LUTS. Ultrasound of the bladder, however, is a valuable diagnostic tool for the detection of bladder diverticula or bladder stones.
- Routine imaging of the urethra is not recommended in the diagnostic workup of patients with LUTS.
- DRE is a minimal requirement in patients undergoing investigation for LUTS.
- The method of choice for the determination of the prostate volume is ultrasonography, preferably via the transrectal route. However, imaging of the prostate by transabdominal...
ultrasound and TRUS is optional.

- The prostate size should be assessed when considering open prostatectomy and transurethral incision of the prostate (TUI), and prior to finasteride therapy.
- If the voided volume is < 150 ml or the $Q_{\text{max}}$ is > 15 ml/s, pressure-flow studies should be considered before surgical intervention, particularly in elderly men. Pressure flow studies should be considered for patients prior to surgical treatment in the following subgroups:
  * Younger men (e.g., < 50 years of age)
  * Elderly patients (> 80 years of age)
  * Postvoid residual urine volume > 300 ml
  * Suspicion of neurogenic bladder dysfunction
  * After radical pelvic surgery
  * Previous unsuccessful invasive treatment

- Measurement of residual urine volume is a recommended test in the assessment of patients with LUTS suggestive of benign prostatic obstruction.
- Endoscopy is recommended as a guideline at the time of surgical treatment to rule out other pathology and to assess the shape and size of the prostate which may have an impact on the treatment modality chosen.

### Treatment of BPH

The aim of treatment is to improve patient's quality of life and it depends on the severity of the symptoms of BPH. These guidelines recommend that a minimal assessment should be done in all patients seeking consultation for BPH before deciding on an appropriate treatment modality.

#### Recommended Guidelines for the Treatment of BPH

- The WW policy should be recommended to patients with mild symptoms that have minimal or no impact on their quality of life.
- Finasteride is an acceptable treatment option for patients with bothersome LUTS and an enlarged prostate (> 40 ml). It can be used when there is no absolute indication for surgical treatment.
- Alpha blocker therapy is a treatment option for patients with bothersome LUTS, irrespective of prostate volume, who do not have an absolute indication for surgical treatment.
- Surgical management (TURP, TUIP, or open prostatectomy) is recommended as first-line treatment for patients with (an absolute indication for the treatment of) LUTS.
- Significant postoperative morbidity, disappointing long-term data, and high costs have resulted in a substantial decline in the clinical use of side-fire and ILC. It is not recommended as a first-line surgical treatment for patients with LUTS. It may have a role in the treatment of high-risk patient subgroups.
- Holmium laser resection of the prostate is a promising new technique with outcomes in the same range as those of TURP.
- Transrectal HIFU therapy is currently not recommended as a therapeutic option for elderly patients with LUTS and is considered an investigational therapy.
- Due to a significant treatment failure rate, TUNA is not recommended as a first-line therapy for patients with LUTS.
- TUMT should be reserved for patients who prefer to avoid surgery or who no longer respond favourably to medication.
Follow-Up
All patients who receive treatment for BPH need follow-up. Follow-up schedules depend on the type of treatment administered.

Recommended follow-up tests after BPH treatment

<table>
<thead>
<tr>
<th>Treatment modality</th>
<th>I-PSS</th>
<th>uro-flowmetry</th>
<th>postvoid residual urine volume</th>
<th>urine culture</th>
<th>histology</th>
</tr>
</thead>
<tbody>
<tr>
<td>WW</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5α-Reductase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhibitors</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>α-Blockers</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Surgical</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Non-surgical</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

It is of importance to have follow-up visits in order to evaluate the effect and side effects of treatment given. The following scheme, or parts thereof, could be used as a suggestion for the timing of follow up.

Recommended follow-up tests after BPH treatment

<table>
<thead>
<tr>
<th>Treatment modality</th>
<th>First year after treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 weeks</td>
</tr>
<tr>
<td>WW</td>
<td>-</td>
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<tr>
<td>5α-Reductase</td>
<td>-</td>
</tr>
<tr>
<td>Inhibitors</td>
<td>-</td>
</tr>
<tr>
<td>α-Blockers</td>
<td>+</td>
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<tr>
<td>Non-surgical</td>
<td>+</td>
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</tbody>
</table>

This short booklet text is based on the more comprehensive EAU guidelines, available to all members of the European Association of Urology (ISBN 90-806179-8-9) at their website - www.urweb.org.