

European Association of Urology – press release

Does disturbed breathing while asleep make some people pee more at night?

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A new study has found that reducing obstructive sleep apnea (where patients have difficulty in breathing while asleep -often associated with loud snoring) can reduce the need to get up and pee at night (nocturia). This study confirms the link between apnea and nocturia, and supports the idea that lifestyle management may contribute to reducing nocturia in certain cases. Nocturia affects more than half of men and women over the age of 50^{ref1} and is reported as the most irritating of all voiding symptoms^{ref2}.

Obstructive Sleep Apnea (OSAS) affects between 2% and 4% of men and women over the age of 50^{ref3}. In severe cases, patients are treated by wearing a special mask while asleep - a CPAP mask (Continuous Positive Airway Pressure mask), which increases the air pressure in the throat, meaning that the airway doesn't collapse during sleep. Now new Dutch research, presented at the European Association of Urology conference in London, shows that wearing the mask also reduces the frequency of nighttime peeing.

Dr. Sajjad Rahnama'i from the Maastricht university Medical Centre (the Netherlands) studied 256 patients (206 male, 50 female) who were treated for OSAS by a CPAP mask. Prior to treatment for apnea, 69% of these patients reported nocturia (the need to get up and pee more than once a night). After starting to use the mask, nearly 2/3 of patients (65%) reported a reduction in the need to pee at night. The exact figure depended on the severity of the nocturia, with for example 32 of the 77 patients who previously reported 2 episodes per night, were able to pass the whole night undisturbed while using the mask.

According to lead researcher Dr Sajjad Rahnama'i: *"This is the first study to show the true incidence of nocturia -peeing at night- in patients who suffer from obstructive sleep apnea. It's also the first study to show the size of the effect of positive pressure mask treatment (CPAP) in patients with obstructive sleep apnea (OSAS) on their nocturia symptoms"*.

Commenting for the EAU, Professor Marcus Drake (Bristol, UK) said:

"It may seem surprising that breathing problems can cause excessive urine production while asleep, but actually the problem is very real. To have a study showing the link, and the potential benefits of therapy, may help establish the treatment into routine clinical practice".

ENDS

Notes for Editors

**PLEASE MENTION THE EUROPEAN ASSOCIATION OF UROLOGY CONGRESS IN ANY STORY
RESULTING FROM THIS PRESS RELEASE**

The 32nd European Association of Urology conference takes place in London from 24th to 28th March. This is the largest and most important urology congress in Europe, with up to 13,000 expected to attend. Conference website <http://eau17.uroweb.org/>

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How has this work been reviewed? This work has not gone through a journal peer-review process. This work is amongst the top-rated 150 abstracts (out of 1171 accepted from around 5000 submissions) from the EAU congress. It was reviewed for suitability and accuracy by members of the EAU communications group at more than one stage in development, and subsequently reviewed by a specialist in the field on behalf of the EAU.

References:

- 1 Demystifying Nocturia: Identifying the Cause and Tailoring the Treatment, Paula Laureanno et al http://www.medscape.com/viewarticle/731730_2
- 2 See: Weiss J, Blaivas JG, Stember D, Brooks M. Nocturia in Adults. Etiology and classification. *Neurourology* 1998; 17: 467–72. The word used is “bothersome”.
- 3 Obstructive Sleep Apnea Syndrome (OSAS). Review of the literature, [Eva Azagra-Calero et al, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3505711/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3505711/)

Abstract: **Reduction of nocturia in patients treated with C-PAP for obstructive sleep apnea syndrome**, Degalliers, S.¹, De Vries, P.¹, Ewoldt, T.², Rahnama'i, S.²¹Zuyderland Medical Center Heerlen, Dept. of Urology, Heerlen, Netherlands, The, ²Maastricht University, Dept. of Urology, Maastricht, Netherlands,

Introduction & Objectives

C-PAP is a well-established therapy for OSAS. It has been suggested to decrease night-time urinary frequency, by reducing nocturnal urine production and improving patients QoL. Previous studies are limited by the low number of included patients. As nocturia is underreported, the true incidence of nocturia in the population and in OSAS cases is higher. In this study, we aimed to assess the incidence of nocturia in patients with OSAS who received C-PAP treatment. We analysed the effect of C-PAP on nocturia episodes.

Material & Methods

All patients who received a C-PAP mask for OSAS in 2015 at the pulmonology department of our hospital (N= 358), were interviewed and invited to take part. After informed consent, all patients were asked to answer the same set of standardized questions about their nocturia episodes prior and after C-PAP. Their concomitant diseases, medication and medical history were scored.

Results

256 patients (206 male, 50 female), took part. The mean age was 60 (28-92). From these 256 patients, 31% reported no nocturia episodes prior or after C-PAP. The prevalence of nocturia (≥ 1 voids per night) was 69%. These were stratified in groups. C-PAP reduces nocturia in 65% of the cases with 1 or more episodes per night. Reduction of nocturia for each subgroup is seen in Table 1.

Conclusions

The prevalence of nocturia with (N ≥ 1 voids per night) among patients with OSAS is 69%. Treatment with C-PAP, reduces nocturia in 65% of patients with 1 or more voiding episodes per night, in patients with OSAS. The use of frequency volume charts would be the next step to pinpoint the exact amount of successful treatment of nocturia with C-PAP in OSAS. This study is the first large study to show a clear relationship between treatment with C-PAP in patients with primary OSAS complaints and the reduction of their nocturia episodes, stratified by the number of voiding episodes per night.

There was no external funding for this work.