World Journal of Urology (2019) 37:2801–2802
https://doi.org/10.1007/s00345-018-2534-x

LETTER TO EDITOR

Obstructive sleep apnea syndrome should always be screened in patients complaining of nocturia

Vincent Misraï[1] · Helene Charbonneau[2] · David Attias[3] · Atul Pathak[4]

Received: 15 October 2018 / Accepted: 16 October 2018 / Published online: 22 October 2018

Dear Editor,

We read with interest the manuscript entitled "Diagnosis and management of nocturia in current clinical practice: who are nocturia patients, and how do we treat them?" recently published in the *World Journal of Urology* [1]. Drangsholt et al. aimed to report their experience on the management of nocturia in a high-volume tertiary urologic center within a retrospective cohort of 403 patients. The authors have to be acknowledged for the quality of their work. Herein, nocturia was accurately categorized into polyuria, nocturnal polyuria or bladder storage problems/overactive bladder according to bladder diaries (BD) results and medical charts were double reviewed over a 12-month period with up to three visits.

Nocturia is usually assumed to be a correlate of benign prostatic hyperplasia in men and overactive bladder in women [2]. In the current series, 192 patients (48%) reported previous treatment for nocturia, most commonly α-blockers (41%) and anticholinergics (56%). Although the authors underlined that multiple factors can contribute to the occurrence of nocturia, we suggest that a better analysis of nocturia etiologies would have improved the patient's selection and in aftermath increased the rate of treatment's responders.

As a matter of fact, it is unclear how many of the patients diagnosed with a nocturia or a nocturnal polyuria could suffer from undiagnosed obstructive sleep apnea in this series [3]. Among all the clinical systemic signs, nocturia [4, 5] and nocturnal polyuria [6] are two of the most independent predictors of obstructive sleep apnea syndrome (OSAS) resulting from increased atrial natriuretic peptide release into the blood secondary to hypoxia during apneic episodes. We would like to address the following points:

First, considering the number of nocturia episodes, the median of nocturia episodes was four. Nocturia more than three times has been reported to be common in severe OSAS and to be a clinical predictive factor of sleep-disordered breathing severity [4]. In aftermath, the clinician should have a high degree of suspicion for severe OSAS in subjects complaining with more than three times nocturia.

Second, considering the etiology of nocturia, exclusion made with heart failure (non-reported), diabetes mellitus (4%) or renal deficiency (non-reported), obstructive sleep apnea syndrome (OSAS) could be one of the main causes of nocturnal polyuria in 76% of patients who fulfilled the BD in this series [7, 8].

Last, considering this association of nocturia with cardiovascular comorbidities, up to 25% of patients presented with cardiovascular comorbidities at index visit. Nocturia has been reported to be a strong independent predictor of prevalent hypertension in OSAS [9].

In conclusion, we believe that, given the limitations underlined in the series by Drangsholt et al., the newly engineered desmopressin medication will not be a game changer if the patient's selection is not improved. In other words, we believe OSAS should always be screened in the first instance (i.e., with Berlin questionnaire) [5] in patients complaining of nocturia before starting any medical therapy [10].

✉ Vincent Misraï
vmisrai@clinique-pasteur.com

1 Department of Urology, Clinique Pasteur, Toulouse, France

2 Department of Anesthesiology and Intensive Care Unit, Clinique Pasteur, Toulouse, France

3 Department of Pneumology, Clinique Pasteur, Toulouse, France

4 Department of Cardiology, Clinique Pasteur, Toulouse, France

Author contributions VM, DA: Manuscript writing/editing. HC, AP: Manuscript reviewing.

Compliance with ethical standards

Conflict of interest The authors have no conflicts of interest with this manuscript.

Ethical approval None.

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