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NOCTURIA HAS A SIGNIFICANT IMPACT ON HEALTH-RELATED QUALITY OF LIFE

Aims of Study

Nocturia is defined as waking at night one or more times to void [1]. The condition, associated with overactive bladder and other non-lower urinary tract causes, is a very bothersome urinary symptom. However, clinical data on nocturia is limited. The objective of this study was to assess the impact of nocturia, and the number of nightly nocturia episodes, on HRQL and sleep.

Methods

A national survey was performed in the US to measure the prevalence of overactive bladder (OAB) and nocturia. The survey used a clinically validated, computer assisted telephone interview. The survey included questions regarding nocturia and other urinary variables. Respondents were categorized into control and OAB groups. A nested case-control study was performed among respondents with OAB and age- and gender-matched controls. Subjects completed a series of questionnaires including an OAB-specific HRQL and symptom questionnaire, the OAB-q, the Medical Outcomes Study (MOS) Short-Form 36, and the MOS-Sleep Scale. Descriptive analyses, t-tests, and analysis of variance with post hoc comparisons were used to analyze the data.

Results

A total of 5204 participated in the NOBLE program. Of the 1769 questionnaires sent to telephone respondents, 919 (52%) respondents were included in a nested case-control study. The study group consisted of 60% females with a mean age of 54.2 years. 79% of respondents reported at least 1 episode of nocturia in the previous 4 weeks; of these 41% reported >1 episode of nocturia/night and 30% reported ≥2 episodes/night. The age of participants reporting nocturia ≥2 episodes/night was significantly greater (60.8 years) than that of participants not reporting nocturia (52 years; p<0.0001). When examining the HRQL impact of nocturia categorically and incrementally, similar findings were noted. Compared with subjects with no nocturia, Table 1 shows those reporting nocturia (≥2 episodes/night) had significantly (p<0.02) reduced HRQL in all OAB-q subscales.

Table 1. OAB-q subscale scores in subjects with nocturia vs no nocturia controlling for age, gender, and clinical conditions

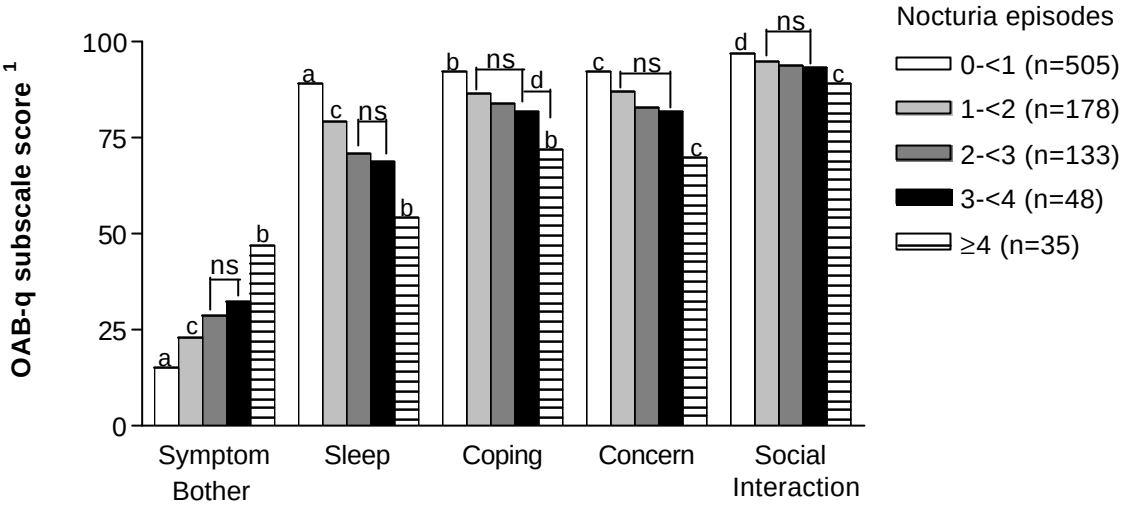
OAB-q subscales[1] [Mean (SE)]	No nocturia (0 to <1) N=505	Nocturia (≥1<2) N=178	Nocturia (≥2) N=216	P value
Symptom bother	15.1 (0.9)	23.1 (1.5)	32.5 (1.4)	<0.001
Coping	92.3 (0.9)	87.0 (1.4)	82.2 (1.3)	<0.02
Concern	92.3 (0.9)	87.7 (1.4)	81.2 (1.3)	<0.001
Sleep	89.0 (1.0)	79.1 (1.6)	67.9 (1.5)	0.0001
Social	97.3 (0.5)	94.7 (0.9)	93.0 (0.8)	≥2 vs 0, p<0.02
HRQL total	92.7 (0.7)	87.1 (1.2)	81.3 (1.1)	<0.001

[1] Higher scores indicate better HRQL; higher symptom bother scores indicate greater symptom bother

In all OAB-q subscales, increasing episodes of nocturia were associated with reductions in HRQL with significant differences (p <0.05) observed for all comparisons with the group of respondents with <1 episode/night (Figure 1). The greatest differences were noted in the sleep subscale with significant (p<0.0001) decreases with each additional nocturia episode. On the MOS-Sleep scale, the number of hours of sleep per night was significantly lower for

participants with ≥ 2 nocturia episodes/night (6.7 hours) versus those with no nocturia (7.0 hours; p<0.02). Participants with ≥2 nocturia episodes/night also reported significantly poorer scores on the somnolence subscale and significantly (p<0.05) greater impairment on the Sleep Index I subscale than those with <2 nocturia episodes/night. Interestingly, the sleep subscale of the OAB-q was more sensitive than the MOS sleep index scale for determining the impact of nocturia.

Figure 1. OAB-q subscale scores by number of nocturia episodes controlling for age, gender, and clinical comorbidities



[1] Higher score indicates better HRQL; higher symptom bother score indicative of greater symtpom bother

[a] p<0.0001 for all groups comparison;
[b] p<0.001 for all group comparison except where noted;
[c] p<0.01 for all group comparisons;
[d] p<0.05 for all group comparisons

Conclusions

Nocturia causes significant distress and, even one episode per night, has a significant impact on both sleep and HRQL. Indeed, each additional episode of nocturia is associated with an incremental reduction in HRQL.

References

1. Van Kerrebroeck P, Abrams P, Chaikin D, et al. The standardisation of terminology in nocturia: report from the Standardisation Sub-committee of the International Continence Society. Neurourol Urodyn 2002; 21:179-83.