Negative impact of nocturia on utility, productivity and health-related quality of life: results of a real world survey of patients in Europe and USA

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Introduction and objectives

• Nocturia is defined by the International Continence Society as ‘waking to void 1 or more times a night followed by sleep’.1
• However, patient bother frequently starts after two or more voids/night which is the American Urological Association definition.2
• While recognised as bothersome, nocturia is often under-recognised as a separate condition. It is hypothesised that a negative correlation exists between nocturia severity (measured by number of night voids) and utility, productivity and health-related quality of life (HRQL).
• The aim of this analysis was to investigate this association in a real world setting.

Materials and methods

• Data were drawn from the Adelphi Lower Urinary Tract Symptoms (LUTS) Disease Specific Programme (DSP), a cross-sectional survey of physicians and their consulting patients conducted Q1 2013.
• Primary care physicians (PCPs) and urology specialists (urologists/gynaecologists) in France, Germany, Spain, UK and USA, actively managing urinary patients, were asked to complete patient record forms prospectively for the next 7 nights.
• The DSP also included measures of utility, HRQL and impact on work/activities - EuroQol 5-D (EQ-5D),3 Overactive Bladder Questionnaire (OAB-q),4 Nocturia Impact (NI) Diary®5 and Work Productivity and Activity Impairment Instrument (WPAI).6
• The methodology, including limitations, has been outlined previously.7
• A Kruskal-Wallis test was performed to test for dependence between quality of life measures and number of night-time voids. Mann-Whitney tests with Bonferroni-adjusted p values were performed to test pairwise comparisons.

Results

• A total of 635 physicians (264 PCPs and 371 specialists) completed records on 8738 patients, of whom 5335 filled out a PSC.
• For mean measures, deterioration in outcome was observed to be linearly associated with increasing number of night voids.
• Significant difference was also observed between 0-1 and 2+ nightly voids for all measures except % of work time missed.
• Mean EQ-SD 5L state valuation fell from 0.88 among patients with 0-1 nightly void to 0.79 among those with 5 or more nightly voids with a significant fall between 0-1 and 2 nightly voids – Figure 1.
• Similarly, mean EQ Visual Analogue Scale (VAS) score fell from 79 to 66 with significant falls between 0-1, 2, 3, and 4 voids per night.
• Mean OAB-q score rose linearly with increasing number of voids per night.

![Figure 1: Number of nightly voids versus EQ-SD State/mean VAS](image)

Mean percentage overall work impairment rose from 17% (0-1 nightly void) to 23% (2 voids) to 30% (3 voids) – Figure 2.

![Figure 2: Number of nightly voids versus Work Productivity and Activity Impairment (WPAI)](image)

Mean percentage activity impairment (outside work) rose significantly with each increase in mean number of nightly voids, from 25% activity impairment among those with 0-1 void per night up to 48% among those with 5 or more nightly voids.

• Note: overall work impairment is calculated from % impairment while working and work time missed.
• Impairment while working rose from 15% (0-1 void) to 22% (2 voids) to 29% (3 voids).
• For percentage work time missed, significant difference was observed between 0-2 nightly voids and 4 voids per night.

![Figure 3: Number of nightly voids versus Nocturia Impact (NI) Diary score](image)

Conclusions

• This analysis from a recent real-world survey suggests nocturia has a strong negative impact on HRQL, utility and work productivity and that this increases with nocturia severity measured by number of night-time voids.
• There is therefore a need to document and raise awareness around the substantial negative impact on quality of life and productivity arising from nocturia.

References

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