

A Cross-Sectional Survey of Nocturia in Japan Using the N-QOL

Introduction and Objective: Nocturia not only affects quality of life, but also is associated with a greater risk of mortality. Nocturia is associated with several comorbidities, such as diabetes and coronary disease, and increases the risk of fracture. The objective of the study is to evaluate the usefulness of the Japanese version of Nocturia Quality-of-Life questionnaire (N-QOL) through a cross-sectional survey of nocturia in Tochigi, Japan.

Materials and Methods: A prospective questionnaire survey was conducted from October 2008 to June 2009 in outpatients at 95 sites in Tochigi, Japan. Participants were surveyed with the Japanese version of N-QOL, the overactive bladder symptom score (OABSS) and self-administered questionnaires about nighttime voiding including awakening, nocturia, nighttime incontinence, falling. Since the relationship between the Japanese version of N-QOL and the OABSS as an out-standard were evaluated by the correlation coefficient (Spearman rank sum test), we considered that the absolute value of number was judged to be 0.400 or greater validity.

Results: Overall, 2494 subjects (male: 1154, female: 1208; with a mean age of 63.2 ± 15.1) joined this survey and the underlying diseases were diabetes, hypertension, cardiovascular disease and BPH. N-QOL score was 86.8 ± 16.9 at average in 2494 patients. Overall, 27% of subjects (625 out of 2494 patients) were diagnosed with an OAB. Overall score of N-QOL was correlated with the OABSS ($r=0.5966$) and nighttime frequency score in OABSS ($r=0.5389$). Both Sleep/Energy domain and Bother/Concern domain in N-QOL were also well correlated with OABSS ($r=0.4898$, $r=0.5361$, respectively) and with nighttime frequency score in OABSS ($r=0.4455$, $r=0.5361$, respectively). N-QOL score was lower in the patients with nighttime awakening compared to without nighttime awakening ($p<0.0001$). Moreover, the decreasing N-QOL overall score correlate with the increasing nighttime frequency, nighttime incontinence and falling number respectively ($p<0.0001$).

Conclusions: The results of this study confirmed that the Japanese version of N-QOL was useful to evaluate nocturia. The Japanese version of N-QOL was useful for evaluation of nocturia. Our results suggest that a score on the N-QOL of <90 indicates a possible influence of nocturia on daily life and that a N-QOL score of <70 indicates a risk of falling.