

CORRELATION BETWEEN OVERACTIVE BLADDER SYMPTOMS AND QUALITY OF LIFE IN JAPANESE MALE PATIENTS

Hypothesis / aims of study

Nocturia is defined as waking one or more times at night to void. In fact, nocturia is one of the most bothersome of symptoms and has a significant effect on health-related QOL. To elucidate the effects of nocturia, we examined the correlation between nocturia-specific QOL and other lower urinary tract symptoms (LUTS).

Study design, materials and methods

This was a retrospective study in which patients with LUTS who visited the outpatient clinic of our hospital and affiliated hospitals from November, 2009 to March, 2012, answered the following questionnaires as part of the screening examination. A total of 259 male patients aged 45-88 (mean 68.0) years completed the following questionnaires: International Prostate Symptom Score (IPSS), overactive bladder symptom score (OABSS), Nocturia QOL questionnaire (NQOL), and the Benign Prostatic Hyperplasia Impact Index (BII). Spearman's rank-correlation coefficient was used to examine the correlation between NQOL total score and NQOL subdomain scores of sleep/energy and bother/concern and scores of other questionnaires. We then compared NQOL score in patients with or without OAB symptoms.

Results

NQOL total score correlated significantly not only with IPSS total, IPSS storage symptoms, IPSS voiding symptoms, and QOL index but also with the OABSS and BII scores (Table1). The NQOL total score was significantly higher in the non-OAB versus OAB patients, indicating that OAB may deteriorate QOL as it relates to nocturia. In nocturia subgroups 0-2 (mild nocturia), NQOL score was significantly higher in non-OAB than in OAB patients, whereas in the nocturia subgroups 3-5 (severe nocturia), NQOL score was not significantly different between non-OAB patients and OAB patients.

Interpretation of results

We first compared NQOL scores with those of other LUTS-related questionnaires. The NQOL total score correlated significantly with scores of the IPSS, QOL index, OABSS, and BII. Not only the total score of each questionnaire but also each subscore correlated with the NQOL scores. To our knowledge, this is the first report to elucidate the relation between the OABSS, BII, and NQOL. The NQOL subdomains of bother/concern were more closely related than were those of sleep/energy to scores of all categories of the other questionnaires. NQOL scores correlated strongly with storage symptoms such as frequency and urgency. Therefore, the NQOL score was significantly lower in OAB patients than in non-OAB patients, indicating that symptoms of OAB may affect the NQOL score.

Concluding message

NQOL total score correlated significantly with IPSS, OABSS, and BII scores. Symptoms of OAB and bother due to benign prostatic hyperplasia might affect QOL in patients with nocturia.

Table 1. Correlation of the N-QOL with IPSS, OABSS, and BII

	Sleep/Energy	Bother/Concern	NQOL Overall Score
IPSS			
Total	-0.4879*	-0.5440*	-0.5792*
Q1	-0.3428*	-0.3497*	-0.3778*
Q2	-0.3607*	-0.4415*	-0.4560*
Q3	-0.2819*	-0.2943*	-0.3194*
Q4	-0.4132*	-0.5082*	-0.5162*
Q5	-0.2820*	-0.2550*	-0.3104*
Q6	-0.3012*	-0.3085*	-0.3237*
Q7	-0.4253*	-0.6116*	-0.5633*
Storage symptom	-0.4898*	-0.6296*	-0.6258*
Voiding symptom	-0.3497*	-0.3298*	-0.3809*
QOL index	-0.3196*	-0.5669*	-0.5071*
OABSS			
Total	-0.4506*	-0.6246*	-0.5928*
Q1 daytime frequency	-0.2480*	-0.3976*	-0.3294*
Q2 nighttime frequency	-0.3873*	-0.5738*	-0.5256*
Q3 urgency	-0.3724*	-0.4932*	-0.4873*
Q4 urgency incontinence	-0.2728*	-0.4217*	-0.3769*
BII			
Q1	-0.4778*	-0.6093*	-0.6016*
Q2	-0.4871*	-0.6288*	-0.6250*
Q3	-0.4928*	-0.6864*	-0.6498*
Q4	-0.4398*	-0.5473*	-0.5459*

N-QOL, Nocturia Quality of Life Questionnaire; IPSS, International Prostate Symptom Score; OABSS, Overactive Bladder Symptom Score; BII, BPH Impact Index.
 *Spearman's rank-correlation coefficient, $P < 0.0001$

Disclosures

Funding: None **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** This is a retrospective study. Patients agreed the answering the questionnaire. Because these questionnaires are ranged within a clinical practice, we didn't apply the institutional review board. **Helsinki:** Yes **Informed Consent:** Yes