

CORRELATIONS BETWEEN QUALITY OF LIFE AND 3-DAY BLADDER DIARIES OF WOMEN WITH LOWER URINARY TRACT SYMPTOMS: ANALYSIS OF 1,006 CASES

Hypothesis / aims of study

Health-related quality of life (HQOL) remains an important issue while treating women with lower urinary tract symptoms (LUTS). However, it is not easy to assess HQOL of LUTS women in the outpatient clinics. Nonetheless, we can assess LUTS objectively from the bladder diary. Knowledge about the correlation between the HQOL and bladder diary may help physicians clarify which LUTS symptom that is best correlated with the corresponding HQOL domain(s), and these may help physicians provide the treatment with the greatest improvement of HQOL, not only symptoms. Thus, the aim of this study is to correlate the bladder diary and HQOL, and identify LUTS parameters that are best correlated with HQOL domains.

Study design, materials and methods

Between September 2010 and March 2014, all LUTS women who underwent urodynamic studies in an urogynecologic outpatient department of a tertiary referral center were requested to complete a 3-day bladder diary and Kings Health Questionnaire (KHQ) [1]. The bladder diary parameters and the KHQ domains were compared by Spearman rank-correlation test.

Results

A total of 1,006 women enrolled in this study. Baseline characteristics are tabulated in Table 1. The correlation matrix between bladder diary parameters and KHQ domains are tabulated in Table 2. Most KHQ domains were best correlated with urgency. Besides, two KHQ domains (general health perception and sleep/energy) were best correlated with nocturia; and severity measures was best correlated with incontinence episodes. In addition, daytime frequency and maximum daytime voided volume were also slightly correlated with most KHQ domains, except severity measures. Total water intake and total voided volume were not significantly correlated with most KHQ domains.

Interpretation of results

We successfully identified the correlations between bladder diary parameters and KHQ domains. Episodes of urgency remained the most important parameter that was best correlated with most HQOL domains. Besides, the episodes of incontinence can be used to assess severity measurement. Nocturia can be used to assess general health perception and sleep/energy HQOL.

Concluding message

Urgency remained the most important parameters associated with HQOL. Besides, we could use the parameters of urgency, incontinence and nocturia of the bladder diary as a surrogate to rapid and comprehensive assessment of HQOL of LUTS women.

Table 1. Baseline data (n=1,006)

Variables	Values
Age (years)	59.8±12.7
Parity	2.8±1.5
General health perception	50.1±21.9
Incontinence impact	44.0±33.1
Role limitations	36.1±31.8
Physical limitations	39.9±32.2
Social limitations	25.2±29.0
Personal relationships	19.3±28.9
Emotions	34.6±30.6
Sleep/energy	40.2±29.9
Severity measures	28.7±25.4
Urgency (72 hr)	7.4±10.4
Incontinence (72 hr)	1.9±4.5
Daytime frequency (72hr)	26.9±11.1
Nocturia (72 hr)	5.4±4.1
DVVmax (mL)	366±171
Total water intake (mL, 72 hr)	4921±1999
Total voided volume (mL, 72 hr)	5372±2134

†Vales are expressed by mean±standard deviation.

‡DVVmax: maximum daytime voided volume derived from 3-day bladder diaries.

Table 2. Correlation matrix (n=1,006)

Variables	Urgency	I	DF	Nocturia	DVVmax	TWI	TVV
GHP	0.21*	0.13*	0.19*	0.24*	-0.17*	0.01	-0.05
II	0.37*	0.27*	0.29*	0.29*	-0.19*	0.01	0.02
RL	0.40*	0.28*	0.28*	0.28*	-0.21*	-0.01	0.00
PL	0.37*	0.31*	0.27*	0.22*	-0.18*	-0.02	0.00
SL	0.33*	0.23*	0.24*	0.25*	-0.22*	-0.06	-0.06
PR	0.22*	0.07	0.19*	0.16*	-0.16*	-0.03	-0.05
Emotions	0.30*	0.22*	0.26*	0.21*	-0.18*	-0.00	-0.03
SE	0.32*	0.14*	0.26*	0.38*	-0.24*	-0.01	-0.02
SM	0.35*	0.52*	0.07*	0.07*	-0.11*	-0.09*	-0.08*

†The correlation is performed by Spearman rank-correlation coefficient (p). *Besides severity measures vs. nocturia (P=0.02) and vs. daytime frequency (P=0.02), all the other P values are <0.001.

‡DF=daytime frequency; DVVmax=maximum daytime voided volume derived from 3-day bladder diaries; GHP=general health perception; I=incontinence; II=incontinence impact; PL=physical limitations; PR=personal relationships; RL=role limitations; SE=sleep/energy; SL=social limitations; SM=severity measures; TVV=total voided volume; TWI=total water intake.

References

1. Kelleher CJ, Cardozo LD, Khullar V, et al. A new questionnaire to assess the quality of life of urinary incontinent women. Br J Obstet Gynaecol 1997;104:1374–9.

Disclosures

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