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Giarenis I[1], Mastoroudes H[1], Cardozo L[1], Robinson D[1], Karouze I[1], Rantell A[1]
1. *King's College Hospital*

IS WETTER WORSE? THE RELATIONSHIP BETWEEN SEVERITY OF URODYNAMIC STRESS INCONTINENCE AND QUALITY OF LIFE

Hypothesis / aims of study

Stress urinary incontinence (SUI) is the most common type of urinary incontinence (UI) in women. It is defined by the International Continence Society (ICS) as 'the complaint of involuntary loss of urine on effort or physical exertion, or on sneezing or coughing'. SUI has a profoundly negative impact on the quality of life (QoL) of women. Videocystourethrography provides a comprehensive investigation of lower urinary tract symptoms. The Versi classification system (1) is a reliable test of severity of urodynamic stress incontinence (USI) by fluoroscopic cough stress testing (2). We undertook this study in order to assess the relationship between the severity of USI and the QoL using a validated disease-specific QoL questionnaire.

Study design, materials and methods

This was a retrospective study in a tertiary referral Urogynaecology Unit. Consecutive women attending a one-stop urodynamic assessment clinic with a diagnosis of USI in the absence of detrusor overactivity (DO) were included in the study. All the data analysed were collected in a standardised proforma as part of the routine investigations and treatment. All women were asked to complete a King's Health Questionnaire which is a reliable, validated disease specific questionnaire which assesses the impact of UI on the QoL of affected women (3). They then underwent multichannel video urodynamics according to the recommendations of the ICS using a Laborie Aquarius Triton machine. Filing cystometry was performed in the supine position, using a single-lumen catheter size 10. The contrast medium (Omnipaque TM) was instilled at a rate of 100 mls/min. Filling was stopped and the catheter removed when the patient developed a strong desire to void or 500 ml of contrast had been infused into the bladder, whichever occurred first. The X-ray table was then rotated so that the patient stood in the vertical position. The bladder neck was viewed in a semi-oblique plane with a 1 megapixel fluoroscope at 30 frames per second. The fluoroscopic cough stress test was performed by asking the women to cough once, three times and then five times in quick succession with maximal effort, to detect any leakage of contrast medium by screening the bladder neck and the urethra. Severity of USI was classified using the Versi classification, which divides incontinence into severe if leakage occurs on the first cough; moderate if on the second or third cough and slight if incontinence is demonstrated only after multiple coughs and encouragement. All women gave informed consent. One way ANOVA was used for comparison of the variables among the groups. SPSS was used for statistical analysis.

Results

318 consecutive patients were reviewed. 70 women with complete data were included in our study. The mean age was 52 years (range 25-77), the mean BMI 27 (range 18-44) and the median parity 2 (range 0-7). 17 % of women were diagnosed with slight USI, 44% with moderate USI and 39% with severe USI.

There was a significant difference in age among the three groups (p=0.002) but no difference in BMI or parity (Table 1). Older women tended to have more severe USI.

Table 1

	Mean (SD)	ANOVA (F)	ANOVA (p)
Age	52.05 (12.13)	6.982	**0.002**
BMI	27.22 (5.61)	0.863	0.428
Parity	2.13 (1.29)	1.033	0.361

There was a statistically significant association between severity of USI and two of the domains of the KHQ (Incontinence Impact and Severity Measures) (Table 2)

Table 2

KHQ domains	Slight USI Mean (SD)	Moderate USI Mean (SD)	Severe USI Mean (SD)	ANOVA (F)	ANOVA (p)
GHP	27.08 (12.87)	30.65 (22.08)	33.33 (20.80)	0.40	0.66
II	66.25 (24.74)	80.39 (24.21)	86.22 (21.43)	3.06	**0.05**
RL	45.58 (35.54)	51.39 (34.17)	64.56 (28.68)	1.86	0.16
PL	56.58 (26.97)	58.94 (31.80)	62.63 (29.67)	0.19	0.82
SL	32.17 (34.79)	37.32 (33.08)	35.96 (32.55)	0.10	0.90
PR	31.73 (31.02)	49.08 (33.03)	48.33 (37.14)	1.08	0.34
E	49.75 (36.85)	55.58 (34.08)	57.15 (29.11)	0.21	0.80
SE	38.58 (26.67)	49.74 (31.50)	38.81 (24.23)	1.32	0.27
SM	50.67 (27.06)	53.58 (25.61)	68.00 (25.42)	2.95	**0.05**

GHP: General Health perception, II: Incontinence Impact, RL: Role Limitations, PL: Physical Limitations, SL: Social Limitations, PR: Personal Relationships, E: Emotions, SE: Sleep/Energy, SM: Severity Measures

Interpretation of results

There is a generally poor association between severity of USI and quality of life. Only two domains of the KHQ have been shown to differ statistically significantly among the three groups. This is not surprising as these domains are directly related to the severity of leakage. They can be used in conjunction with other objective tests such as pad test or cough stress test to define severity if there are no available resources for urodynamics.

Concluding message

The impact on quality of life is multifactorial and does not depend only on the severity of the USI. Objective tests cannot replace symptom questionnaires and quality of life instruments in the assessment of women with urinary incontinence, demonstrating the importance of patient orientated outcome measures.

References

1. BJOG 1986;93:364-366
2. J Obstet Gynaecol 2010;30:492-495
3. BJOG 1997;104:1374-1379

Specify source of funding or grant	**None**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**It was a retrospective review of casenotes and routinely collected clinical data.**
Was the Declaration of Helsinki followed?	**No**
This study did not follow the Declaration of Helsinki in the sense that	**Not applicable to this retrospective study of routinely collected data.**
Was informed consent obtained from the patients?	**No**