562

Arunkalaivanan A[1], Tanu C[1]
1. *City Hospital*

REVISIT OF THE VALIDITY OF THE SHORT FORMS OF INCONTINENCE IMPACT QUESTIONNAIRE (IIQ-SF) AND THE UROGENITAL DISTRESS INVENTORY (UDI-SF) IN INCONTINENT WOMEN WITH AN ABNORMAL URODYNAMIC DIAGNOSIS.

Hypothesis / aims of study

The Incontinence Impact Questionnaire (IIQ) was designed by Shumaker et al to assess the impact of urinary incontinence on activities and emotions in women. The Urogenital Distress Inventory (UDI), which is meant to complement the IIQ, was developed at the same time by the same group to assess the degree to which symptoms associated with incontinence are troubling. Short forms of the IIQ and UDI were developed with the original data on the full-length questionnaire. Regression analyses suggested that a 7- to 8-item questionnaire would accurately predict the IIQ long from total score, and a 6-item form would predict the UDI long form.

We aimed to assess the validity of the short forms of Incontinence Impact Questionnaire (IIQ-SF) and the Urogenital Distress Inventory (UDI-SF) in incontinent women with an abnormal urodynamic diagnosis

Study design, materials and methods

All women who presented with urinary incontinence between January and December 2007 were evaluated with urodynamic assessment by using LifeTech™ equipment at a filling speed of 20- 50 ml/minute. Prior to urodynamic assessment, all women had completed the IIQ-SF, UDI-SF pre-installed in the machine and the scoring was calculated by the software provided with the machine. IIQ-SF questionnaire consists of Physical activity, travel, social relationship and emotional health as subsegments. UDI-SF consists of obstructive/discomfort, irritative and stress symtopms as components. Women were classified into 3 groups based upon the diagnosis at the end of urodynamic assessment: Detrusor overactivity(DO), urodynamic stress incontinence (UDSUI) and mixed urinary incontinence (MUI). Women with normal studies (n=6) have been excluded as the number is too small for comparison. The overall score of UDI and IIQ were taken into account for analysis. The data was analysed using SPSS™ release 14.0.

Results

Table 1. Demographic and Symptom features

Variable	DO (142)	UDSUI (72)	Mixed UI (30)	p value
Age	53±14	58±13	51 ±9	0.1
Parity	2(1-3)	3(2-3)	2(1-3)	0.737
Increased Frequency (yes/no)	82/51	32/32	10/15	0.072
Urgency (yes/no)	82/52	29/32	11/14	0.097
Urge* incontinence(yes/no)	74/59	31/32	5/20	0.005
Nocturia (yes/no)	48/83	22/41	5/20	0.273
Stress Incontinence* (yes/no)	86/45	56/8	22/3	0.001

DO – Detrusor Overactivity; UDSUI – Urodynamic Stress incontinence; Mixed UI – Mixed urinary incontinence
Age- (Mean±Standard deviation); Parity (Median, range)
* - statistically significant.

Table 2.
Comparison of Urodynamic parameters with Incontinence Impact Questionnaire (IIQ) and Urinary Distress Inventory (UDI) scores

Variable	DO (142)	UDSUI (72)	Mixed UI (30)	p value
FDV	57(31-86)	79(31-145	61(49-126	0.003
MCC	282 ± 109	357±107	388±101	<0.001
EDP	11(5-19)	8 (4-13)	6 (4-10)	0.004
MFR	16(9-21)	21(15-27)	24(18-26)	<0.001
VV	97(1-268)	226(19-355)	335(0-461)	<0.001
IIQ	67(36-100)	69(34-100)	67(43-95)	0.981
UDI	50±18	54±23	47±19	0.443

FDV- First desire to void; MCC- Maximum Cystometric capacity;
EDP – End -detrusor pressure; MFR- Maximum Flow Rate; VV- Voided volume
MCC & UDI (Mean±Standard deviation) All other variables are described as median and interquartile range.

Interpretation of results

A total of 244 urodynamic traces were available for analysis. 142 women had detrusor overactivity, 72 were diagnosed as Urodynamic stress incontinence and 30 had mixed urinary incontinence. The demographic, symptom and urodynamic charateristics are presented in the attached Tables 1 and 2. The maximum flow rate (MFR) and voided volume (VV) are significantly less in DO group compared to the UDSUI and MUI groups ($p < 0.001$). The overall scores of UDI and IIQ were higher in all three groups (table2). However, there is no significant difference between each groups : $p = 0.981$ (IIQ scores) and $p = 0.443$ (UDI)

Concluding message

The overall scores of UDI-SF and IIQ-SF correlate well with the severity of urinary incontinence by the symptoms and the urodynamic findings. Nevertheless, there is no significant difference of scores amongst the DO, UDSUI and MUI groups.

References

Am J Obstet Gynecol. 2001 Jul;185(1):25-31.

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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 eithics committee approval because	**it is not required**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**