

SCREENING TOOLS FOR VOIDING DIFFICULTIES IN WOMEN: A COMPARISON OF THE ICIQ-FLUTS AND THE MODIFIED IPSS QUESTIONNAIRES

Hypothesis / aims of study

Existing female lower urinary tract symptom questionnaires, including the ICIQ-FLUTS, are validated for use in women with incontinence, but not for women with voiding difficulties. Previous studies have found that the classic symptoms of hesitancy, slow stream, intermittent stream, splitting or spraying of urine, straining, terminal dribble, feeling of incomplete emptying, and post-micturition dribble, have poor sensitivity and specificity for voiding difficulties in women [1,2].

The objective of this study was to evaluate the validity of two of the most widely used symptom questionnaires, the ICIQ-FLUTS and IPSS, as screening tools for voiding difficulties in women.

Study design, materials and methods

Consecutive patients attending for urodynamic testing, completed a modified 7-item version of the IPSS, designed for use in women, and 6 items from the ICIQ-FLUTS, assessing the frequency of voiding symptoms and their associated bother. Objective voiding difficulties were defined as peak flow <15ml/s at free uroflowmetry, or residual urine >50ml, measured by catheterisation or ultrasound. Scores were compared using Pearson's correlation and the Mann-Whitney U test. ROC analysis was used to identify the optimal cut-off value for each questionnaire. Analyses were performed using SPSS v16.0.

Results

18 of the 101 women who completed both questionnaires were found to have objective voiding difficulties on free uroflowmetry. The ICIQ-FLUTS symptom score was significantly correlated with both the ICIQ-FLUTS bother score ($r=0.528$ $p<0.0001$) and the modified IPSS score ($r=0.684$ $p<0.001$). Only 13 patients reported no bother associated with voiding difficulties using the ICIQ-FLUTS. The ROC analyses are shown in Figure 1.

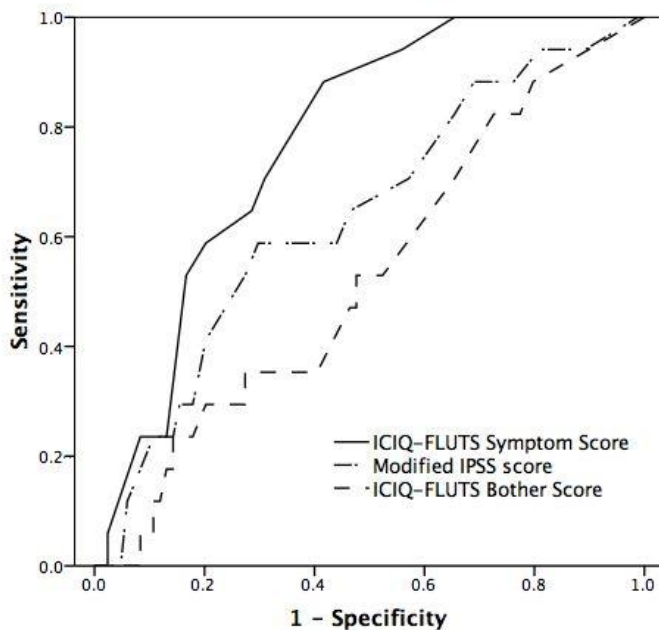


Figure 1: ROC curves for Modified IPSS score, ICIQ-FLUTS symptom score, and ICIQ-FLUTS bother score

The symptom questions from the ICIQ-FLUTS were most likely to predict voiding difficulties (AUC 0.774, 95%CI 0.674-0.874). Neither the modified IPSS (AUC 0.638, 95%CI 0.494-0.781), nor the bother questions from the ICIQ-FLUTS (AUC 0.529, 95%CI 0.384-0.675), performed effectively. Median ICIQ-FLUTS symptom score in the voiding difficulty group was 13 (IQR=5), compared to a median of 8 (IQR=5) in the group without voiding difficulty ($p<0.0001$). Using a cut-off of ≥ 7 in the ICIQ-FLUTS score had 100% sensitivity for voiding difficulties, with 34.5% specificity.

Interpretation of results

Subjective voiding symptoms are common in women without objective voiding difficulties. The 6 voiding symptom questions from the ICIQ-FLUTS perform well as a screening tool for voiding difficulties in women, but are not diagnostic. These questions could be used effectively in primary care when initiating anticholinergic therapy. Assessment of bother associated with voiding symptoms does not improve diagnostic accuracy. Although the IPSS has been used as a symptom questionnaire in women, it is not a valid assessment of voiding difficulties.

Concluding message

Objective voiding difficulties in women can be effectively detected using the 6 voiding symptom items from the ICIQ-FLUTS questionnaire.

References

1. Int Urogynecol J 2007;18 (Suppl 1);S8
2. Int Urogynecol J 2008;19;801-804

<i>Specify source of funding or grant</i>	Nil
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	No
<i>This study did not require ethics committee approval because</i>	Exempted from formal ethical approval as a questionnaire study.
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes