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# THE COMBINATION OF ICIQ-UI SF QUESTIONNAIRE AND STRESS TEST IS A USEFUL TOOL TO DIAGNOSE THE TYPE OF URINARY INCONTINENCE IN WOMEN AND ITS INITIAL MANAGEMENT

Hypothesis / aims of study
There is no simple and universally accepted instrument for the initial diagnosis of urinary incontinence (UI). The objective of this study was to analyse the value of the ICIQ-UI SF questionnaire, the stress test (ST), and the combination of both for the diagnosis of the type of UI.

Study design, materials and methods
Cross sectional study performed in 116 women with UI symptoms in two specialised health care centres. Before the urodynamic study the subjects filled the ICIQ-UI SF (ICIQ) questionnaire and ST was performed with desire to void and the volume voided was measured. The urodynamic diagnosis based on filling and voiding cystometry was used as reference diagnosis. On the basis of the combination of ICIQ symptoms and ST, the patients were grouped in 3 diagnostic groups: **(A)** S*tress urinary incontinence (SUI)* when patient marks in the questionnaire the question about the symptom of leakage during effort or exercising and had positive ST, **(B)** U*rge urinary incontinence* when patient marks the symptom of leakage before get the toilet without leakage during effort or exercising and had a negative ST, **(C)** *Mixed IU* when in the questionnaire patient marks both symptoms (leakage before get the toilet and leakage during effort) and she had a positive ST. Sensitivity, specificity, positive and negative predictive values of both tools were calculated with reference to urodynamic diagnosis. Statistic "likelihood ratio (LR)" were assessed for every diagnostic tool.

Results
According to the questions of the ICIQ-UI-SF questionnaire, 45 women (38.8%) have symptoms of stress UI (SUI) , 19 (16.4%) had Urge UI (UUI) symptoms and 49 (42.2%) Mixed UI symptoms (MUI). The stress test was positive in 75 (64.7%) and the mean voided volume after the ST was 302,85 ml. (SD 131.34).The distribution of the patients in the 3 diagnostic groups, according the combination of both tests was: **(A)** in 35 (30.2%), **(B)** in 17 (14.7%) and **(C)** 37 (31.9%). In 27 of the 116 patients was not possible be assigned to one of the 3 groups. The urodynamic diagnoses were: urodynamic SUI in 45 subjects (38.8%), detrusor overactivity incontinence (DOI) in 25 (21.6%) , combination of both in 30 (25.9%) and 16 patients had other urodynamic diagnosis. Sensitivity, specificity, positive and negative predictive values are showed in **table 1**. The combination of ICIQ-UI SF and stress test showed good specificity and negative predictive value, and the best LR coefficients were obtained: 3.11 (pure SUI); 6.64 (pure UUI); 2.64 (MUI) and 3.77 (SUI pure and mixed ).

*Table 1*

| | | Urodynamic diagnosis | | | |
|---|---|---|---|---|---|
| | | **SUI** | **DOI** | **MUI** | **SUI total ( SUI+ MUI)** |
| **Symptoms in ICIQ-UI SF** | Sensitivity | 0.568 | 0.478 | 0.703 | 0.929 |
| | Specificity | 0.714 | 0.916 | 0.662 | 0.361 |
| | PPV | 0.581 | 0.611 | 0.413 | 0.742 |
| | NPV | 0.703 | 0.865 | 0.868 | 0.722 |
| **Stress test + symptoms in ICIQ-UI SF** | Sensitivity | 0.545 | 0.478 | 0.629 | 0.826 |
| | Specificity | 0.825 | 0.928 | 0.762 | 0.775 |
| | PPV | 0.685 | 0.647 | 0.472 | 0.873 |
| | NPV | 0.722 | 0.866 | 0.859 | 0.704 |

**SUI**- Urodynamic Stress Urinary Incontinence; **DOI** Detrusor overactivity incontinence;
**MUI** Mixed urinary incontinence ( SUI+DOI)
PPV-Positive Predictive Value; NPV-Negative Predictive Value

Interpretation of results
Although it is a simple questionnaire, the ICIQ-UI SF seem to have an important value as a screening tool to differentiate the SUI of the IUU. Patients with Mixed UI are not so well detected using ICIQ-UI-SF questionnaire and stress test (LR=2,64). Probably the use of a supplementary test, as the micturition diary would provide an additional information better diagnosis.

Concluding message
The combination of the ICIQ-UI SF questionnaire and a stress test will allow to differenciate SUI and UUI as a basic tool for initial management of patients with UI symptoms.

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