VOIDING SYMPTOMS OBTAINED BY OPEN VERSUS DIRECTED ANAMNESIS AS PREDICTORS OF URODYNAMIC VOIDING DYSFUNCTION IN WOMEN WITH PREVIOUS ANTI-INCONTINENCE SURGERY

Hypothesis / Aims of the Study
The NICE clinical guideline for the management of urinary incontinence in women gives value to the presence of “symptoms suggestive of voiding dysfunction” and recommends multichannel urodynamics before surgery in patients who present them. However, there are few studies correlating voiding symptoms with the findings of pressure-flow studies in women, which focus on the diagnosis of bladder outlet obstruction, without considering the diagnosis of detrusor underactivity [1]. The aim of the study is to evaluate whether voiding symptoms obtained by open versus directed anamnestic are predictors of urodynamic voiding dysfunction in a group of women more likely to present it: women with previous anti-incontinence surgery.

Study design, material and methods
One hundred and fourteen consecutive women with previous anti-incontinence surgery, undergoing conventional cystometry following “good urodynamic practices” by the same urologist, in a five year period, were included in a retrospective study. At the time of examination and in a standardized manner, patients were asked if they had “difficulty emptying the bladder” (question 5 of the short form of the ”Urogenital Distress Inventory” questionnaire). If the answer was positive, they were asked to describe their symptoms, considering weak stream, strain to void and intermittent stream (voiding symptoms obtained by open anamnestic). If the patient responded negatively to the first question or did not present the three voiding symptoms, they were asked for the presence of each of these symptoms in a directed way (added to the above: voiding symptoms obtained by directed anamnestic). Symptoms were recorded as being either present or absent without any stratification for severity. Bladder outlet obstruction was defined as Qmax ≤ 12 mL/s + pdet Qmax ≥ 25 cm H2O [2], Detrusor underactivity was defined as Qmax ≤ 12 mL/s + pdet Qmax ≤ 10 cm H2O [3] and mixed voiding dysfunction as Qmax ≤ 12 mL/s + pdet Qmax between 11 and 24 cm H2O, with a concordant free uroflowmetry in all cases. Voiding symptoms and urodynamic diagnosis were tabulated independently. We sought statistical association between any urodynamic voiding dysfunction and the presence of any voiding symptom obtained by open and directed anamnestic. Symptoms were recorded as being either present or absent without any stratification for severity. Bladder outlet obstruction was defined as Qmax ≤ 12 mL/s + pdet Qmax ≥ 25 cm H2O [2], Detrusor underactivity was defined as Qmax ≤ 12 mL/s + pdet Qmax ≤ 10 cm H2O [3] and mixed voiding dysfunction as Qmax ≤ 12 mL/s + pdet Qmax between 11 and 24 cm H2O, with a concordant free uroflowmetry in all cases. Voiding symptoms and urodynamic diagnosis were tabulated independently. We sought statistical association between any urodynamic voiding dysfunction and the presence of any voiding symptom obtained by open and directed anamnestic using chi-square or Fisher's exact test. The same was done with each individual symptom. In case of obtaining a statistically significant result (p < 0.05) we calculated sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), accuracy, positive and negative likelihood ratios and strength of agreement using Cohen's kappa. The information was processed with Stata 11.2 program (Stata Corporation, 2009).

Results
Of the 114 patients 23 were excluded (6 using medication active on the lower urinary tract, 6 examinations done reducing pelvic organ prolapse, 5 with neurological diseases, 5 with urethralisys done before the examination and 1 with bladder pain syndrome), leaving 91 patients for analysis. Table 1 shows the clinical history of the patients. Eighteen patients had urodynamic voiding dysfunction (19.8%; 13 bladder outlet obstruction, 3 detrusor underactivity and 2 mixed voiding dysfunction). Table 2 shows statistical association between voiding symptoms and urodynamic voiding dysfunction. There was a statistical association between urodynamic voiding dysfunction and a) presence of any voiding symptom obtained by open anamnestic and b) strain to void obtained by open anamnestic. There was no association with voiding symptoms obtained by directed anamnestic. Table 3 shows sensitivity, specificity, PPV, NPV, accuracy, positive and negative likelihood ratios and strength of agreement of the voiding symptoms with statistical association.

Interpretation of results
In women with previous anti-incontinence surgery, there is a statistical association between urodynamic voiding dysfunction and a) presence of any voiding symptom obtained by open anamnestic and b) strain to void obtained by open anamnestic, being higher for strain to void. Nevertheless, the strength of agreement is low. There was no association with voiding symptoms obtained by directed anamnestic (that could be considered similar to those obtained by symptoms scores).
Concluding message: There is a low strength of agreement between urodynamic voiding dysfunction and voiding symptoms obtained by open anamnesis, but no association with those obtained by directed anamnesis.

References
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