

SUMMARY

The urodynamic study is the 'gold standard' in the functional diagnostics of the lower urinary tract. The whole study consists of several procedures, one of which is urethral pressure profilometry (UPP). It was developed rather as a research tool, not necessarily dedicated to everyday clinical practice. Technically, UPP is a test focused on the urethral pressures assessment, i.e. within the urethra at successive points along its length. Despite being in use for decades, there are still many ambiguities about this method and numerous limitations are raised. To date, there are no clear guidelines regarding the indications for UPP testing, nor as to the interpretation of its results. The wealth of data obtained in UPPs is often not fully used.

For the purpose of the present dissertation, first the literature on the functional diagnostic tests of the urethra was studied. Further, an electronic database of over four thousand records of urethral profilometries was analyzed. Such a database exploration enabled to assess urethral profilometric parameters characteristic for adult Polish women with lower urinary tract symptoms.

A careful verification and qualitative analysis of this large database revealed technical deficiencies and shortcomings in a significant number of the performed records, a finding contributing to the discussion on their clinical value. Statistical analysis revealed a significant influence of the equipment used (specifically, of the type of the pressure transducers) on the test results.

An attempt was made to analyze statistically many parameters additional to those routinely taken into account, with the hope that they could be more widely used for diagnosing lower urinary tract symptoms in women. The discussion brought up both the clinical value of urethral profilometric diagnostics and a comparison of the results of this dissertation to those available in the literature.

The main drawn conclusions are:

- 1) there were statistically significant differences in the values of most UPP parameters between the subjects studied using water-filled catheters (higher values) and the subjects studied using microtip transducer catheters (MTC) (lower values); this finding is a serious criticism of the use of electronic catheters for UPP;

2) in the general population, the functional urethral length at rest did not differ from the length at stress; moreover, the functional urethral length accounted for 90% of the total urethral length;

3) patient age did not influence the length of the urethra;

4) no relationship was found between the maximal urethral closure pressure (MUCP) and functional urethral length (FUL);

5) the location of the continence zone varies significantly in particular populations and its more distal location is associated with a higher risk for stress urinary incontinence (SUI).

The presented evidence supplements the world literature on urethral profilometry in adult women, indicating that it can be a valuable method of the functional urethral assessment. This test seems to be both underestimated and not fully used. In line with the literature, it should be emphasized that urethral profilometry was not implemented to diagnose SUI and should not be used for this purpose. However, it remains a valuable tool for the comprehensive assessment of urogynecologic patients with lower urinary tract symptoms.