Англоязычная секция

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Shatylko T.V.

Uroflowmetry in diagnosis and evaluation of treatment efficiency

Saratov State Medical University, Department of Urology

Importance. Micturition disorders may severely impact the quality of life by affecting personal hygiene, social adaptation and sleep quality. Since such patients' complaints rarely may be evaluated objectively and precisely, a diagnostic tool which allows the physician to determine urination quality comes in handy. This diagnostic tool is called uroflowmetry and it is widely used, though its diagnostic potential may not be fully recognized yet.

Goal. To determine the potential of uroflowmetry in diagnostics of various diseases.

Materials and methods. Uroflowmetry protocols and corresponding registry data for 2010-2011 were extracted from the computer database of urodynamics laboratory in urology clinic of Saratov SMU. Statistical analysis was performed on the extracted data. Raw mathematical models of uroflowmetry curves for different types of urodynamic impairment were built.

Results. Total number of patients was 1292; total number of uroflowmetry studies – 1618. This means that some of the patients had their urination evaluated continuously to determine the outcome of initial treatment. Uroflowmetry control before and after treatment was performed on 129 patients suffering from benign prostatic hyperplasia: Qmax became normal in 71 patient (55,04%), Qave became normal in 61 patient (47,29%), both parameters became normal only in 55 patients (42,66%). Lack of micturition improvement during repeated uroflowmetry studies in patients who receive conservative treatment for benign prostatic hyperplasia tells the urologist that more aggressive forms of treatment are justified. Also of interest was an attempt to calculate several indexes which mathematically describe the shape of an uroflowmetry curve. First group included patients with benign prostatic hyperplasia (728 patients), second group included patients with other causes of infravesical obstruction (493 patients), such as narrowing of distal urethra. Mean TQmax/TQ was 0.347 for the first group and 0.384 for the second group ($p<0.1$), mean Qave/Qmax was 0.321 for the first group and 0.379 for the second ($p<0.05$).

Conclusion. Uroflowmetric control of treatment results in benign prostatic hyperplasia allows switching tactics properly. Uroflowmetric curve shape and the mathematical indexes describing it have a diagnostic value.

Key words
uroflowmetry, urodynamics, benign prostatic hyperplasia

