Incontinence of urine in women. Diagnosis and treatment

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Abstract.
Urinary incontinence is the involuntary loss of urine. The condition occurs in both sexes, but is most commonly observed in women (twice as often), and is more frequently encountered with advancing age. According to the International Continence Society, urinary incontinence is defined as "the complaint of any involuntary loss of urine that represents a social or hygienic problem and is objectively demonstrable." In general, according to the Terminology Standardization Committee, urinary incontinence is "the complaint of any involuntary loss of urine under conditions of social embarrassment." [1] In female patients, urinary incontinence is usually related to dysfunction of the bladder or pelvic floor muscles, which often appears during pregnancy or childbirth and/or menopause. There are two main subtypes of urinary incontinence: stress urinary incontinence (SUI) and urge urinary incontinence (UUI). According to the International Urogynecological Association (IUGA) and the International Continence Society (ICS), stress urinary incontinence is defined as the complaint of involuntary leakage on effort or exertion, or on sneezing or coughing, while urge urinary incontinence is the complaint of involuntary leakage accompanied by or immediately preceded by urgency. These two types are so common that they frequently coexist as a combination of symptoms called mixed urinary incontinence. Most women with urge urinary incontinence also receive a diagnosis of overactive bladder syndrome, in which urge urinary incontinence is a possible component.[1,2]

Keywords:
Urinary incontinence
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pelvic floor muscles
disfunction
**Introduction.** The prevalence of UI varies widely in different studies due to differences in definition and population, but ranges from 8% to 45%, with stress urinary incontinence being the most common. The prevalence of urinary incontinence increases with age, parity, smoking, and body mass index (BMI). Stress urinary incontinence is defined as the involuntary leakage of urine during any activity that increases intra-abdominal pressure, such as laughing, coughing, running, and even walking for some women. It is a common condition that affects 1-3% of women under 60 years and 5-11% over 60 years. The diagnosis of stress urinary incontinence requires urodynamic investigations to exclude detrusor overactivity, in addition to history-taking, physical examination, frequency/volume charts, and urine analysis. Surgical procedures for the treatment of stress urinary incontinence were first described in the literature in the early 1990s and have undergone significant modifications since then; some procedures have been modified, while others have been completely abandoned. Given the pace of evolution of modern treatment methods, the urogynecologist must be up-to-date with the latest recommendations and emerging long-term complications.

**Methods and materials.** Our study is a retrospective one conducted on a sample of 30 female patients diagnosed with urinary incontinence, hospitalized between 2018-2022 in the urology department of the Republican Clinical Hospital. The study was carried out based on the analysis of observation records from the electronic archive of the department, with all available records for the mentioned years being examined. The study is based on the analysis of data from the clinical observation records of the respective patients using a questionnaire developed for the purpose of the study.

The parameters used in this study were:
- general patient data;
- presenting complaints at admission;
- medical history data;
- clinical diagnosis;
- clinical data;
- paraclinical data;
- presence or absence of genital prolapse;
- presence or absence of prior surgical correction of genital prolapse or urinary incontinence;
- method of case resolution (surgical or conservative treatment);
- duration of hospitalization;
- complications.

The section devoted to general patient data included information on age, domicile, marital status, occupation, and social status. Medical history data included the number of pregnancies, number of births, family history, allergy history, harmful habits, as well as data on the current illness history, disease period, and pathological history (concomitant genital and extragenital diseases and antecedents).

The patients' presenting complaints at admission were analyzed. Clinical data included the results of the general physical examination (constitutional type, presence of obesity or infantilism) and examination by organ systems (cardiovascular, respiratory, renal, etc.), as well as the condition of the mucous membranes and skin.

The urological examination focused on the presence/absence of genital prolapse. The clinical symptoms were classified according to the degrees of effort urinary incontinence described in the literature:
- Grade I (mild incontinence): involuntary urine loss during coughing, sneezing, or physical exercise. This is the mild form of incontinence.
- Grade II: losses that occur while walking, transitioning from a lying position to a standing one or with increases in intraabdominal pressure, even if the woman is lying down.
- Grade III: Involuntary urine losses are almost continuous when the woman is standing, and occur with any change in position when lying down.

The algorithm for the diagnosis of urinary incontinence included: medical history data, identification of risk factors, the three possible mechanisms: estrogen insufficiency, "tissue aging", peripheral neuropathy; clinical features through the evaluation of urinary symptoms and stress clinical tests; paraclinical investigations:
general urine analysis, micturitional cystography, urodynamic study: cystomanometry, post-micturition evaluation of urinary residual volume, pelvic and renal ultrasound to identify the coexisting gynecological pathology.

The methods of management of urinary incontinence cases in the hospital were analyzed, and the methods of conservative and surgical management of cases and their short-term results were studied.

The research methods used were:
- Retrograde - existing data were studied up to the time of the work;
- Documentary - we studied the observation sheets of 30 patients diagnosed with urinary incontinence, admitted to the Urology Department of the Republican Clinical Hospital during the period 2018-2022.
- Analytical - we analyzed the obtained data and elaborated our conclusions;
- Mathematical - we carried out all necessary calculations for the schematic representation of research results;
- Statistical - we performed statistical calculations in accordance with the calculation formulas and Microsoft Excel program;
- Comparative - we compared the obtained data with those present in the national and international specialized literature.

Results. Among the risk factors, postmenopausal age was found in 36.6%, grade II obesity was present in 5 (16.7%) patients, grade I-II cystocele in 6 (20%) patients, flaccid neurogenic bladder in 1 (3.4%) patient, and surgical interventions in the history for certain types of genital prolapse or large fibroids were present in 10 (33.4%).

Urinary incontinence has a negative effect on all major quality of life criteria. Although it is considered a non-life-threatening pathology, stress urinary incontinence affects both the physical well-being and psychological status of patients and constitutes an additional financial burden.

Stress urinary incontinence was present in 100% of patients, bladder pain associated with pain in the suprapubic region and stress urinary incontinence manifested by urgency
and lack of sensitivity to urination in 66.7% of patients, and macrohematuria in 40% of cases. Grade II stress urinary incontinence was found in 46.7% of patients and grade III in 53.3% of patients.

Accurate medical history and physical examination are the most important elements in evaluating women with urinary incontinence. Micturition cystography was performed in 93.4% of patients, cystourethroscopy in 13.3% of patients, and urethrocystography with micturition contrast in 6.7% of patients.

5. Conclusion. Treatments for urinary incontinence include conservative, mechanical, pharmacological, and surgical interventions. Medical treatment was followed by 86.7% of patients, and surgical treatment, namely division of the urethral sling, was found in 86.7% of patients, while 13.3% of patients only underwent cystoscopy during hospitalization.