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INTEGRATIVE ANALYSIS OF URINARY RETENTION DISORDERS BASED ON LITERATURE DATA

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Abstract
The causes of urinary incontinence are polyetiological. According to an integrative analysis of the literature, it was found that obstetric injuries (22%) abnormal physical activity (27%), estrogenic failure not corrected during postmenopause, as well as the presence of extra-genital diseases in patients accompanied by an increase in abdominal pressure (42%) or the presence of systemic connective tissue dysplasia (27%) are of particular importance listed factors.

Keywords: Bladder, woman, stress urinary incontinence, age, body mass index, childbirth, obesity, quality of life, statistics, risk factor.

Introduction

Without posing an immediate threat to the patient's health, urinary incontinence has a serious negative impact on the psyche, significantly complicates production problems, in severe cases deprives a woman of her ability to work, and often complicates family relations. Urinary incontinence is most often of multifactorial origin: the causes of incontinence are associated, as a rule, with impaired functional mechanisms of urinary retention, anatomical and topographic features of the lower urinary tract, or age-related ovarian dysfunction [1, 3, 4, 7, 11, 15, 16, 20, 24]. Pregnancy and childbirth make a certain contribution to the development of urinary incontinence. According to some researchers, depending on the gestation period, the loss of small volumes of urine occurs in 84% of women [2, 6, 8, 10, 12, 15, 18, 19, 21, 23]. In examined women, the incidence of urinary incontinence after the first birth ranges from 24 to 29%.

Purpose of the study: integrative analysis of urinary retention disorders based on literature data.

Study results and discussion

In recent years, epidemiological studies on urinary incontinence are mainly aimed at determining different types of urinary incontinence in the structure of the disease and identifying differences between them in order to clarify their pathogenetic mechanisms [3, 5, 8, 10, 21, 23].
In the modern classification of urinary incontinence (ICS, 2010), the largest proportion is made up of three types of forms of this disease:
stress urinary incontinence (stress urinary incontinence); urgent form or imperative urinary incontinence; mixed variants [1, 2, 4,10, 11, 20, 22, 23].
From the literature, it was found that the most common type of incontinence is stress incontinence or stress incontinence [5, 6, 7, 10, 17, 19, 21]. It is characterized by involuntary urine loss during exercise associated with an excess of intravesical pressure over the maximum urethral pressure in the absence of detrusor contractions. The term "stress incontinence" is generally accepted, and stress refers to all

factors leading to a sudden increase in intra-abdominal pressure: coughing, laughing, sneezing, lifting weights, running, transition from horizontal to vertical, etc. [3, 8, 9, 10, 19, 22, 23].

According to domestic and foreign authors, urinary incontinence occurs in 20-67% of women [2, 5, 6, 10, 22, 23]. At the same time, the incidence of this symptom in women increases with age. According to the literature, urinary incontinence is noted from 3% to 24% of women aged 30-60 years and more than 50% of women after 60 years [6, 7, 21]. With a detailed examination of elderly women on inpatient treatment, the prevalence of urinary incontinence can reach 90% [1, 4, 9, 12, 13].

According to some authors, the concept of urinary incontinence pathogenesis in women is multifactorial and has undergone significant changes in recent years [2, 5, 10, 18, 22]. In the pathogenesis of urinary incontinence with tension, two main mechanisms are distinguished: hypermobility of the bladder and urethra and insufficiency of the internal sphincter of the urethra. The hypermobility of the urethra is based on the weakness of its support by the musculo-ligamentous structures of the pelvic floor, as a result of which there is a rotational descent of the neck of the bladder and the proximal part of the urethra during periods of increasing intra-abdominal pressure [21, 23]. With the concomitant opening of the urethra, urinary incontinence occurs with physical stress. Insufficiency of the internal urethral sphincter is defined as decreased or absent closure function of the bladder neck and proximal urethra. This form of stress incontinence is characterized by an open neck of the bladder at rest and low abdominal pressure that causes urine leakage (Valsalva leak point pressure) [15, 18, 19, 20, 22]. These anatomical changes are reflected in the Ed stress urinary incontinence classification. McGuire and J. Blaivas (1988), which is currently generally accepted and approved by ICS [1, 2, 3, 4, 6, 7]. According to this classification, the first two types of urinary incontinence are characterized by failure of the musculo-ligamentous apparatus of the genitourinary tract and hypermobility of the urethra of varying degrees of severity. The third type of urinary incontinence is associated with insufficiency of the internal sphincter of the urethra. In addition to anatomical classification, classification by severity degrees has been widely used in our country [3, 4, 5, 9, 19, 21, 23]. With a mild severity of stress urinary incontinence, involuntary urine output is noted only during a sharp and sudden increase in intra-abdominal pressure: running, severe cough, weight lifting, etc. At the same time, urine loss is calculated in only a few milliliters. With moderate severity, clinical signs appear during laughter, coughing, sneezing, light exercise. A severe degree is characterized by the fact that patients lose urine when walking, moving from a horizontal position to a vertical one, during sexual intercourse [7, 8, 10, 18, 22].

There is a so-called "integral theory of urinary retention." This theory is the most cited by most leading experts. Its essence lies in the fact that urine retention, both at rest and under stress, is achieved with the resultant of three multidirectional forces in the pelvic floor. These include: 1) resting resistance of the multifactorial closing mechanism of the bladder and urethra; 2) stability of urethral anatomical support, including pelvic floor muscles and urogenital diaphragm; 3) adequate innervation of all listed mechanisms. To do this, it is necessary to have a full-fledged state of the urothelium and the presence of mucus in the urethral lumen, the elasticity of collagen, which is part of the urethral connective tissue, the preservation of the tone of the urethral smooth muscle and the full vascularization of the urethra. If these components are violated, urinary incontinence develops [1, 2, 10, 15, 16, 23].

Many authors believe that the most common cause of urinary incontinence in women is a violation of the pubourethral ligamentous apparatus that occurs after traumatic childbirth, prolonged weight lifting. The development of urinary disorders after operations on the pelvic organs is associated with a close topographic-anatomical relationship between the urinary and sexual systems in women, the community of innervation and blood supply [14, 15, 16].

It has been proven that one of the leading etiological factors in the development of stress urinary incontinence in menopausal women is progressive estrogenic deficiency [5, 11, 12, 13]. According to some authors, with an age-related decrease in estrogen synthesis, atrophic processes occur in the urothelium, vascularization of the urethra wall decreases, and the content and elasticity of collagen of the urogenital connective tissue and the mympanic ligament of the pelvic organs decreases, which leads to a violation of the closure mechanisms [3, 16, 20].

Very, often (in 30-60% of women) urinary incontinence occurs during pregnancy, which is associated with hormonal changes. Scientists studied the incidence of urinary incontinence in women in Sweden and found that in women who did not give birth, urinary incontinence occurs in 5.5% of them with a history of one birth - in 10.6%, and more than 2 births - in 16.4% of women [3, 10, 23, 24].

In recent years, scientific material has accumulated on the study of the prevalence and risk factors for the development of urinary incontinence, however, many aspects of this problem remain the subject of discussion, which determines the need to continue research in this direction [6, 17, 19, 22]. In this regard, classifications of risk factors for the development of urinary incontinence in women have appeared. According to the classification proposed by R.C. Bump (1997), the predisposing risk factors for urinary incontinence in women should include: genetic factor; racial factor; cultural features; neurological; anatomical; connective tissue status [24].

There are also precipitating factors, contributing factors, and decompensation factors. Provoking factors include childbirth, pelvic surgery and radiation. According to the latest data, the main role in the development of the disease is played not by the number, but by the nature of childbirth. Stress incontinence occurs more often after childbirth, accompanied by ruptures of the muscles of the pelvic floor, perineum, urogenital diaphragm, obstetric operations, which leads to divergence of the muscles of the pelvic diaphragm, replacement of muscle tissue with connective tissue scars [1, 2, 14]. However, stress urinary incontinence also occurs in patients who have no history of causes that impair bladder sphincter function. In such cases, it may be associated with congenital systemic connective tissue failure [1, 2, 4, 10, 12, 16]. Contributing factors include bowel disorders, an irritating diet, a woman's increased vitality, a woman's increased weight, menopause, infections, mental status, and taking certain medications. The decompensation factor includes the woman's age [10, 15, 24].

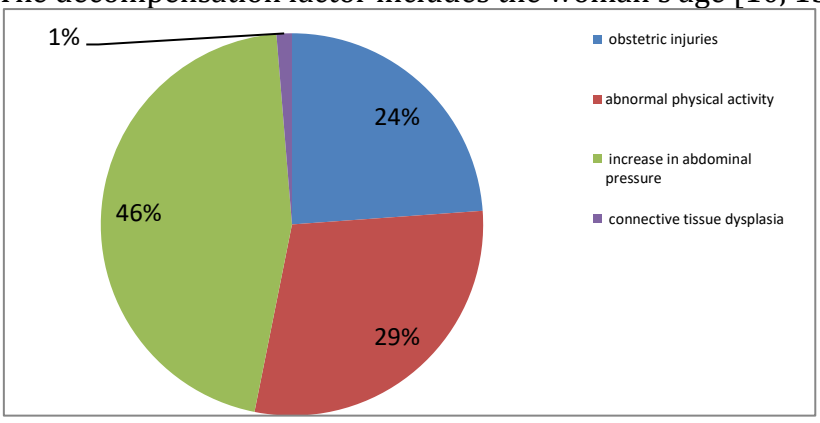

Diagram 1. Factors leading to incontenence

Most of the existing theories of the etiology and pathogenesis of urinary incontinence in women explain its development by anatomical disorders of the bladder and urethra, leading to impaired transmission of intra-abdominal pressure and the appearance of a zero or negative gradient between the value of intra-abdominal pressure transmitted to the bladder and urethra [10, 12, 15, 16, 17].

Conclusion

The causes of urinary incontinence are polyetiological. According to an integrative analysis of the literature, it was found that obstetric injuries (22%) abnormal physical activity (27%), estrogenic failure not corrected during postmenopause, as well as the presence of extra-genital diseases in patients accompanied by an increase in abdominal pressure (42%) or the presence of systemic connective tissue dysplasia (27%) are of particular importance listed factors.

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