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RELEVANT ASPECTS OF OBESITY AND URINARY INCONTINENCE IN WOMEN (literature review)

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Abstract. The increasing prevalence of obesity makes it one of the key problems of modern medicine. In women, excess body weight not only increases the risk of cardiovascular and metabolic diseases, but also contributes to the development of urinary disorders. The presented review is devoted to the analysis of modern data on the relationship between obesity and urinary incontinence, as well as an assessment of their medical and social significance.

Keywords: obesity, urinary incontinence, women's health, risk factors, literature review.

Relevance. Obesity is now regarded as one of the most significant medical and social problems of modern health care. According to numerous epidemiological studies, over the past decades, there has been a steady increase in the number of overweight and obese people around the world, which makes this disease one of the most common chronic non-infectious pathologies [1, 3, 4, 5, 8, 11, 14, 15]. The high prevalence of obesity is due to the complex impact of genetic, metabolic, hormonal, behavioral and socio-economic factors [2, 3, 6, 8, 10, 16]. Along with an increase in the incidence of cardiovascular diseases, type 2 diabetes mellitus and metabolic syndrome, obesity has a significant impact on the condition of the genitourinary system, being one of the risk factors for the development of urogynecological diseases in women.

The problem becomes especially urgent due to the fact that obesity is much more common among women of reproductive and peri-menopausal age [1, 8, 12, 13]. Excessive body weight has an adverse effect on the endocrine function of the body, disrupts metabolic processes and contributes to the development of various pathological conditions that reduce the quality of life of patients. Among the many complications of obesity, urinary incontinence is a widespread disease characterized by involuntary urine discharge and accompanied by pronounced physical, psychological and social consequences [2, 3, 7, 11, 13].

According to the current literature, the prevalence of urinary incontinence among women varies widely and depends on age, reproductive history, the presence of concomitant diseases and body weight. Despite the fact that urinary incontinence is not a life-threatening condition, it has a significant impact on the daily activity of patients, limits professional and social activities, reduces self-esteem, contributes to the development of anxiety and depressive disorders, and disrupts family and interpersonal relationships [4, 6, 9, 14, 16]. Many women do not seek medical help for a long time, considering this condition as a natural manifestation of age-related changes or a consequence of childbirth, which leads to the progression of the disease and the development of complications.

Obesity is now recognized as one of the leading modifiable risk factors for urinary incontinence. The results of clinical and epidemiological studies indicate a direct relationship between an increase in body mass index and the incidence of various forms of incontinence [1, 2, 5, 8, 12]. It was found that each additional unit of body mass index is accompanied by an increased risk of developing urinary disorders. A particularly strong relationship is found between obesity and stress urinary incontinence arising from physical stress, coughing, sneezing or other conditions accompanied by increased intra-abdominal pressure.

The pathogenetic mechanisms of urinary incontinence in obesity are complex and multifactorial. One of the main factors is considered to be a chronic increase in intra-abdominal pressure due to excessive accumulation of adipose tissue in the anterior abdominal wall and internal organs. Constant mechanical impact on the muscles of the pelvic floor, fascial ligamentous apparatus and structures of the lower urinary tract leads to a gradual decrease in their functional consistency [2, 3, 7, 11, 13]. As a result, the support of the bladder and urethra is impaired, which creates conditions for the occurrence of stress incontinence.

Along with mechanical factors, endocrine and metabolic disorders play an important role. Adipose tissue is currently considered as an active endocrine organ producing a wide range of biologically active substances - adipokines, cytokines, growth factors and inflammatory mediators. A change in their production leads to the development of chronic systemic inflammation, a violation of tissue metabolism, a change in the processes of remodeling of connective tissue and a deterioration in microcirculation. These changes may have a direct impact on the functional status of the bladder, urethra and pelvic floor structures [5, 13, 14, 16].

Impaired neuroendocrine regulation is essential in the formation of urinary incontinence. Obesity is accompanied by a change in the activity of the hypothalamic-pituitary system, imbalance of sex hormones, impaired tissue sensitivity to insulin and a change in the functioning of the autonomic nervous system. These processes affect the contractility of the detrusor, the function of the bladder sphincter apparatus and the neuromuscular regulation of urination. In this regard, urinary incontinence in obese women should be considered not only as a local violation of the function of the lower urinary tract, but also as a manifestation of systemic neurohumoral and metabolic changes in the body.

Pregnancy and childbirth are important risk factors [10, 13, 14, 15, 16]. It is known that during pregnancy, the load on the muscles of the pelvic floor, the ligamentous apparatus of the pelvis and the urinary system increases significantly. Multiple births, large fetuses, traumatic deliveries and obstetric complications have a particularly adverse effect. In the postpartum period, an increase in body weight and the formation of persistent metabolic disorders are often observed, which further increases the likelihood of urinary incontinence [1, 2, 4, 7, 11, 13].

No less important role is played by age-related changes in the female body. In the peri - and post-menopausal periods, a decrease in estrogen levels leads to a deterioration in the blood supply to urogenital tissues, a decrease in the content of collagen and elastin, a decrease in the strength of connective tissue structures and a deterioration in the functional state of the pelvic floor muscles. Recent studies have shown that women with urinary incontinence have pronounced changes in the qualitative and quantitative composition of collagen fibers compared to women who retain a full function of urinary incontinence [3, 12, 15, 16]. These changes are of particular importance in patients with a hereditary predisposition to connective tissue dysplasia.

In addition, the development of urinary incontinence is facilitated by hard physical labor, chronic diseases of the respiratory system, accompanied by prolonged cough, chronic constipation, varicose veins, splanchnoptosis, neurological diseases, as well as operations on the pelvic organs. The combination of several risk factors significantly increases the likelihood of the onset and progression of the disease [14, 15, 16].

Despite a significant number of studies addressing obesity and urinary incontinence, many aspects of pathogenesis remain poorly understood. The search for new diagnostic markers continues, the mechanisms of the influence of metabolic and hormonal disorders on the function of the lower urinary tract are being clarified, modern methods for the prevention and treatment of this pathology are being developed [2, 3, 7, 11, 13].

Conclusion. The high prevalence of obesity among women, the variety of pathogenetic mechanisms of its effect on the urinary system, a significant incidence of urinary incontinence and a pronounced decrease in the quality of life of patients determine the exceptional relevance of further study of this problem. A comprehensive understanding of the mechanisms of the formation of urinary disorders will improve approaches to the prevention, early diagnosis and treatment of obese women, contributing to the improvement of their physical, psychological and social well-being.

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