



TREATMENT OF LEUKOPLAKIA OF THE BLADDER AND RESULTS OF PATHOMORPHOLOGICAL STUDY

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ANNOTATION

This article discusses the treatment of bladder leukoplakia and the results of pathological examination. A study was conducted on 87 women with chronic cystitis. All women underwent cystoscopy. Conservative treatment, surgical treatment followed by pathological examination were performed. The use of transurethral resection of bladder leukoplakia as a treatment has shown to be more effective than treatment with a conservative method.

KEY WORDS: *Leukoplakia of the bladder, treatment, cystoscopy, transurethral resection.*

INTRODUCTION

Leukoplakia of the bladder (LMP) is a disease in which the transitional cell epithelium is replaced by squamous cell keratinizing epithelium against the background of dys hormonal disorders, chronic inflammation of the bladder and genital organs[1].

Chronic inflammatory diseases of the lower urinary tract in women are widespread[3]. Often, due to the ineffectiveness of conservative treatment, the patient is suspected of having interstitial cystitis. Risk factors include early onset of sexual activity, promiscuity, history of invasive interventions, including bladder catheterization, the presence of concomitant chronic gynecological diseases or vaginal dysbiosis [2,4]. Therefore, determining the risk factors for leukoplakia of the bladder, the frequency of occurrence by age groups, determining the duration and further determining the specific pathomorphological changes of each form is one of the most important problems of modern medicine [3].

In recent years, there has been a steady increase in the number of patients with various forms of dysuria. Persistent urinary disorders in women are common manifestations of chronic inflammatory processes of the lower urinary tract [1]. Of particular note is the increase in the number of patients with persistent urinary disorders, despite the normalization of urine tests and the cessation of bacteriuria (B.K. Komyakov et al ., 2004) [2].

Cystoscopy and biopsy of altered bladder mucosa in patients suffering from chronic cystitis, according to various authors, in 56-82% of cases reveals squamous metaplasia of the epithelium with varying degrees of keratinization, represented by foci of whitish plaque, clearly demarcated from the unchanged mucosa (A.M. Romanenko, 1985, I.A. Klimenko, 1986, A.F. Vozianov et al . , 1994, O.B. Laurent et al ., 2008) [1, 3, 4]. Clinicians combine all forms of squamous cell metaplasia of the

epithelium with the term “leukoplakia.” There are no exact statistics on the prevalence and incidence of bladder leukoplakia.

In the light of modern research, leukoplakia is a pathological process that is characterized by a violation of the basic functions of stratified squamous epithelium: the absence of glycogen formation and the occurrence of keratinization, which are normally absent [2]. Historically, defects in the embryonic development of the bladder mucosa, the role of a specific infection (tuberculosis, syphilis), and vitamin A hypovitaminosis were considered as the causes of the development of squamous metaplasia. Recently, the most probable theories of the origin of leukoplakia of the bladder are inflammatory, hormonal imbalance (the influence of estrogens) [5] , the result of thermal, chemical exposure; disruption of microcirculation in the wall of the bladder [6, 7], as well as destruction of the normal glycosaminoglycan layer of the urothelium under the influence of urogenital infection (Ch . trachomatis , U. urealiticum , N. gonorrhoeae , M. genitalium , Tr . vaginalis , Herpes simplex I, II) [1, 5, 8].

The most controversial and fundamentally important question remains whether leukoplakia of the bladder mucosa is a precancer . Some authors believe that leukoplakia is not prone to malignancy (D.I. Golovin, 1982, I.A. Klimenko, 1986, V.N. Prilepskaya , 2003). Others believe that it can transform into cancer, so patients with leukoplakia need careful long-term observation (R. Benson et al ., 1982, A.M. Romanenko, 1985, I.A. Klimenko, 1986, A. Staack , 2006, N. Schlechte et al ., 2006).

Clinical manifestations of leukoplakia of the bladder are persistent dysuria, urinary urgency, pollakiuria and chronic urethral pain in combination or alone with chronic pelvic pain. It was revealed that cystoscopy in 63.6-100% of patients with persistent dysuria and chronic pelvic pain reveals squamous



metaplasia of the epithelium of the bladder mucosa, localized in the bladder neck and bladder triangle.

It should be noted that to date there is no generally accepted algorithm for diagnosing leukoplakia of the bladder, no unified treatment tactics have been developed depending on the stage of the pathological process, and there is no consensus on the tactics of surgical treatment of leukoplakia of the bladder. The applied conservative methods of treatment of chronic cystitis, including courses of antibacterial drugs, anti-inflammatory treatment, instillation of the bladder with antiseptic solutions, physiotherapeutic procedures on the bladder area, temporarily bringing clinical improvement in the patient's condition, have virtually no effect on the layer of the mucous membrane changed by the type of leukoplakia [2, 3]. The methods of surgical treatment of bladder leukoplakia (transurethral resection, electrocoagulation, vaporization) lead to the removal of the altered layer of mucosa, the formation of a zone of severe ischemia at the site of exposure, which causes a long period of recovery of the altered bladder wall (6 months or more), clinically accompanied by symptoms of persistent dysuria and possible relapse of the disease [6, 8].

The insufficient effectiveness of diagnostic and therapeutic measures in patients with leukoplakia of the bladder leads to the formation of neurosis-like conditions, which determines persistent physical, emotional and social maladaptation of this group of patients [6].

Improvement of endoscopic technologies and the use of new principles of coagulation of altered tissues make it possible to expand the options for treatment of bladder leukoplakia. The method of non-contact argon plasma coagulation (APC) has recently been increasingly used by surgeons of various specialties to devitalize superficial pathological processes and stop capillary bleeding. However, the use of this method in endourological interventions has not yet been studied [8].

According to foreign literature, cystoscopy in 70–100% of patients with persistent dysuria and chronic pelvic pain reveals leukoplakia localized in the bladder neck. At the present stage of development of medicine, reports have appeared on the use of transurethral resection (TUR) for leukoplakia of the bladder [5,7,8].

PURPOSE OF THE STUDY

Evaluation of the effectiveness of transurethral resection of bladder leukoplakia.

MATERIALS AND METHODS OF RESEARCH

87 women with chronic cystitis were examined. The patients' ages ranged from 20 to 82 years, with a mean age of 41.4 years. When studying the history of the disease, starting with the initial symptoms of the disease (discomfort in the bladder area, weakness, feeling of incomplete emptying of the bladder), the development of the disease was analyzed in detail. Patients experience a constant feeling of heaviness in the bladder area,

both when the bladder is full and in the absence of urine, pain and prolonged spasms after urination, discomfort or pain above the bladder, in the interstitium, in the pubic area and in the area of the entrance to the vagina, dysuria (eg, frequent urination). Such complaints served as a guide for the study. All women underwent cystoscopy. In 45 of them, changes in the mucous membrane of the bladder neck and Lieto's triangle, characteristic of leukoplakia are white, "velvet-like" flat plaques of irregular shape with distinct edges, slightly rising above the mucous membrane of the bladder.

To process and analyze the research materials, a patient examination card was developed, which, in addition to passport data, included anamnesis data, results of clinical and laboratory studies, data from morphological and immunohistochemical examination of biopsy and surgical materials.

We began treatment of patients with conservative measures. The complex of treatment measures included antibacterial therapy and bladder instillations.

RESEARCH RESULTS

Thus, leukoplakia of the bladder is more often observed in women of childbearing age, progression of the disease occurs in middle-aged patients, i.e., in young people (39-49 years), with age the manifestations of metaplasia decrease. Metaplasia is characteristic of younger patients and is associated with frequent manifestations of chronic cystitis. There is essentially no consensus regarding treatment and management. Currently, antibiotics are the most common therapy used in medical practice. They have the ability to reduce symptoms of symptomatic remission, but their effectiveness is not constant.

The conservative treatment was effective in 10 patients. However, the long-term results of conservative treatment of this pathology were not so encouraging: out of 10 patients who received conservative therapy, 8 noted the resumption of urgency and pain in the lower abdomen within 3 to 9 weeks after treatment. Due to the ineffectiveness of the complex therapy, 35 patients underwent TUR of the areas of the bladder mucosa affected by leukoplakia. Based on the results of a pathomorphological study, the diagnosis of leukoplakia of the bladder mucosa was confirmed.

When examining biopsy material, the morphological specificity of leukoplakia in relation to sexually transmitted infections was studied, and the following was discovered. It was found that there were changes characteristic of all infections, and changes depending on the type of infection. General changes include the following general pathomorphological changes: hyperplasia, metaplasia and parakeratosis urothelium, inflammatory infiltrate of the private lamina. These general pathological changes help to understand the morphogenesis of normal and verrucous types of leukoplakia. Dystrophic changes in squamous and variable epithelium, metaplasia and dysplasia depended on the strong or weak level of the inflammatory process that developed under the influence of infection.



All patients, on days 4–5 after surgery, noted a significant improvement in their well-being, that is, a decrease or disappearance of pain in the bladder area, in the urethra when urinating, and the frequency of urination was significantly reduced. A re-examination was carried out after 3 months. A positive effect from the operation was noted in 38 patients. Mild dysuria remained in 7 patients.

Cystoscopy with biopsy (squamous metaplasia of the epithelium 64%, leukoplakia of the bladder 36%). The sizes of the areas are 0.7 - 3.0 cm. Surgical treatment was performed when conservative therapy was ineffective. Depending on the method of intervention performed, patients were divided into two groups. In group I, TUR of the bladder mucosa was performed using standard methods. In group II, monopolar vaporization of the altered mucosa ("Spray" mode, depth of coagulation necrosis up to 0.3 cm). In the postoperative period, conventional conservative therapy was carried out. Evaluation of the effectiveness of treatment in the immediate and long-term postoperative period was carried out according to the above scale. Relief of symptoms on the 1st day . in I gr. 68%, in II group. 86%. Control cystoscopy with biopsy was performed after 3 months. The picture of completely restored bladder mucosa was in 78% in group I and 100% in group II. Histological examination of the surgical area revealed no pathological foci. After 3 months satisfaction with treatment in 84 and 92%, and after 24 months. in 94 and 98%, respectively.

According to the severity of symptoms: mild degree (9-15 points) – 21%; moderate with maintaining sexual activity (16-20 points) 53% and severe without sexual activity (21-24 points) – 26%.

CONCLUSIONS

The results of treatment using transurethral resection of bladder leukoplakia showed that the presented method of treating this pathology is effective. To relieve urinary symptoms in women with LV, transurethral resection of the bladder is performed. Improvements in quality of life have a success rate of 57.6%. Our study validates transurethral resection as an alternative treatment option for patients who have a very low complication rate.

LITERATURE

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