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MODERN APPROACHES TO PREVENTION AND REHABILITATION OF ADHESIVE DISEASES IN PATIENTS WITH EXTERNAL GENITAL ENDOMETRIOSIS

Farrukh O. Abidov [1], Gulnara D. Matrizaeva [2], Zulkhumor F. Djumaniyazova [3]

1 Assistant of the Department of Obstetrics and Gynecology, Urgench branch of the Tashkent Medical Academy, Urgench, Uzbekistan
E-mail: farruh11.95@gmail.com

2 PhD, Associate Professor, Head of the Department of Obstetrics and Gynecology, Urgench branch of the Tashkent Medical Academy, Urgench, Uzbekistan

3 PhD, Associate Professor, Head of the Department of Internal Medicine and Dermatovenereology, Urgench branch of the Tashkent Medical Academy, Urgench, Uzbekistan

ABSTRACT

It is known that these methods can reduce the degree of the inflammatory process and the frequency of adhesion formation, but there is no confirming clinical and experimental statistical data on this issue. That is why it is especially important to search for not only new mechanisms leading to the formation of adhesions in the pelvic organs, but also to develop methods for the prevention and treatment of adhesions, which will improve the tactics of managing such patients. Anamnesis, general clinical and gynecological examination were collected.

Key words: external genital endometriosis, bovhyaluronidase, interleukins.

INTRODUCTION

External genital endometriosis (EGE) is a chronic disease characterized by the proliferation of endometrial tissue outside the uterine cavity.

Genital endometriosis ranks third in the structure of gynecological pathology and its prevalence is steadily increasing. The causes of endometriosis remain a subject of scientific debate. The development of the disease can be facilitated by environmental conditions, psychological characteristics of the individual,

excessively active sexual life and frequent change of sexual partners, genetic predisposition, changes in the ectopic endometrium, which can be caused by an infectious factor [1–3]. A number of works are devoted to the study of infection in the formation of endometrioid heterotopias. Kobayashi H. et al. (2014) considered the possible initiating role of intrauterine infection with the subsequent development of sterile inflammation in EGE [8]. As a result of microbial stimulation of pathogen-associated receptors, innate immunity is activated. According to Vester-gaard AL et al. (2010), the human papillomavirus was detected in the endometrium of 10% of patients with EGE [9].

Despite the significant spread of endoscopic technologies in modern gynecology and the active use of various barrier anti-adhesion agents, the frequency of development of the adhesion process, as well as relapses after removal of endometrioid foci, remains high and does not show a tendency to decrease. This is due to a number of factors, including the peculiarities of the pathogenesis of endometriosis and the difficulty of preventing adhesive processes even with modern methods of surgical intervention.

According to scientific literature, among young women suffering from adhesions and who have not yet realized their reproductive plans, 26% of patients undergo repeated surgical interventions in the first 10 years after operations on the pelvic organs. These data emphasize the seriousness of the problem, especially for patients of reproductive age, since adhesions in the pelvis can significantly complicate not only subsequent surgical interventions, but also affect fertility, causing infertility or chronic pain.

One of the key factors contributing to the development of adhesions is the use of carbon dioxide (CO_2) during laparoscopic surgery. Recent studies indicate that carbon dioxide can contribute to the development of peritoneal hypoxia, which creates favorable conditions for the formation of adhesions due to the activation of inflammatory processes and damage to mesothelial cells. This makes carbon dioxide not only a necessary element for creating a surgical field, but also a potential risk factor that requires careful monitoring and the search for alternative ways to minimize its negative impact.

In this regard, one of the most pressing tasks of modern gynecological surgery is the search for and development of new, more effective methods of prevention and treatment of adhesive processes. The development of pathogenetically substantiated prevention strategies will improve surgical tactics and minimize the risk of relapse of the adhesive process, which, in turn, will improve the quality of life of patients and improve their reproductive prospects. Modern research in this area is aimed at studying the possibilities of optimizing barrier technologies, as

well as the introduction of innovative techniques, such as the use of antioxidant drugs and methods that help reduce hypoxia and inflammatory changes in the peritoneal tissues.

Purpose of the research.

The aim of this scientific study was to improve the results of surgical treatment of patients with common forms of endometrioid disease, which is one of the most complex and urgent tasks of modern gynecology. An important aspect of the work was to study the mechanism of formation of adhesions in the small pelvis, since adhesions that occur after surgical interventions significantly worsen the quality of life of patients, increase the risk of relapse of the disease and can negatively affect reproductive function.

The objectives of the study included analyzing the frequency of formation of adhesions in patients with external genital endometriosis after surgical treatment. Particular attention was paid to patients of reproductive age, since this group is the most vulnerable to complications associated with reproductive dysfunction due to adhesive changes. The search for pathogenetically substantiated methods for preventing the adhesion process was a priority, since existing treatment methods are often insufficiently effective, which leads to the need for repeated interventions.

During the work, the emphasis was placed on identifying key factors predisposing to the development of adhesions, among which an important place is occupied by inflammatory reactions, tissue trauma during surgery, as well as peritoneal hypoxia, which is enhanced by the use of carbon dioxide during laparoscopic operations. The study of these factors allowed not only a deeper understanding of the pathogenesis of the adhesive process, but also to propose new approaches to its prevention aimed at minimizing their impact.

Optimization of surgical tactics for such patients requires a comprehensive approach, including both improving surgical techniques and developing innovative methods for preventing adhesions. This involves the use of modern barrier technologies, antioxidant drugs, and methods that help reduce tissue hypoxia, which in the long term should significantly improve the outcomes of surgical treatment and increase the likelihood of successful implementation of reproductive plans in patients of reproductive age.

Materials and research methods. The study included a thorough anamnesis, including an analysis of complaints and the medical history of patients, as well as an extensive general clinical and gynecological examination. The diagnosis of pelvic adhesions (PA) was established based on a comprehensive approach that included physical examination data, the results of instrumental diagnostic methods,

such as ultrasound examination (US) of the pelvic organs and diagnostic laparoscopy, which provides visualization of pathological changes and confirmation of the diagnosis.

The study examined 40 patients diagnosed with pelvic adhesions. All participants were divided into two groups to evaluate the effectiveness of the proposed algorithm for the prevention and treatment of adhesions. The first group (the main group) included 20 patients who, before and after surgical laparoscopy, received the proposed algorithm for the prevention and treatment, including the use of Longidaza. The main active ingredient of this drug is bovhyaluronidase azoximer at a dosage of 3000 IU. It is known for its enzymatic properties that promote the destruction of collagen structures, which prevents the development of adhesions and improves the outcomes of postoperative treatment.

The second group (control) also included 20 patients who underwent standard treatment and preventive measures used in clinical practice for similar conditions. Both treatments were aimed at preventing relapses of the adhesion process, but the control group did not receive Longidaza, which made it possible to compare the effectiveness of standard prevention methods with the use of an innovative approach.

A comparative analysis of the data from both groups was aimed at assessing the dynamics of the adhesion process, the frequency of relapses and the general condition of patients after surgery, in order to determine the clinical effectiveness of the proposed method using Longidaza and its impact on treatment outcomes in patients with pelvic adhesions.

Results. The average age of the patients participating in the study was 28.59 years. Analysis of age data showed that the age of women suffering from different degrees of severity of external genital endometriosis (EGE) did not have reliable differences between the groups. The average age of onset of sexual activity in women in the study sample was 23.35 years, which is consistent with the data on the late reproductive start in this population.

Somatic pathology was diagnosed in 21 patients (52%) with various stages of EGE. The most common were chronic gastrointestinal diseases, endocrine disorders, including thyroid pathologies, cardiovascular diseases, as well as chronic tonsillitis, frequent episodes of acute respiratory viral infections (ARVI) and recurrent infection caused by the herpes simplex virus (HSV). These data emphasize the high level of comorbidity among patients with endometriosis, which can affect the course of the underlying disease and complicate therapeutic treatment.

The age of menarche, i.e. the age of the first menstruation, was on average 13.35 years. The duration of the menstrual cycle in patients varied within 27.75 days, which is within the physiological norm. The average duration of menstrual bleeding was 5.25 ± 0.25 days. More than half of the women (23 patients, or 57.5%) noted painful menstruation, which is a typical symptom of endometriosis. Spotting before and after menstruation was observed in 4 women (10%), but menstrual function, in general, did not differ in patients with different stages of EGE.

A history of infertility was present in 16 patients (40%), of whom 12 women (30%) were diagnosed with primary infertility. This highlights the high prevalence of fertility disorders among patients with endometriosis. Despite this, 6 patients (15%) had a history of childbirth. Four patients (10%) had one childbirth, while one patient (2.5%) had repeated childbirth. One patient (2.5%) had an induced abortion. A history of spontaneous miscarriage in early pregnancy was noted in 2 women (5%), which also indicates reproductive dysfunction in this group of patients.

Habitual miscarriage, i.e. two or more spontaneous abortions, was present in 4 patients (10%) with different stages of EGE. It should be noted that obstetric history data, including the presence of births, miscarriages and abortions, did not demonstrate significant differences between patients with mild and severe forms of endometriosis, which may indicate heterogeneity of the effect of endometriosis on reproductive function depending on individual factors.

Conclusion.

The conducted study allowed to evaluate the clinical efficiency of Longidaza application in rehabilitation of patients with external genital endometriosis (EGE) and adhesive processes. The results showed that inclusion of this drug in postoperative therapy resulted in significant improvement of clinical and laboratory parameters compared to traditional rehabilitation methods applied in patients of the control group who received only standard therapy. Application of Longidaza contributed to more pronounced clinical dynamics, which was manifested in decrease of severity of adhesive process, improvement of general condition of patients and decrease of probability of relapse. These results confirm that inclusion of Longidaza in postoperative therapy can effectively prevent development of adhesive processes in postoperative period, improving quality of life and decreasing necessity of repeated surgical interventions in patients with EGE.

Thus, the use of Longidaza can be considered as a promising component of complex treatment aimed at the prevention and treatment of adhesions, which

increases the effectiveness of rehabilitation and improves long-term treatment outcomes in patients with endometriosis.

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