ISSN 2181-3187

# MEASURES TO PREVENT ADHESIONS AFTER PELVIC SURGERY

***Yulchiyev Karimjon***
***Haydarov Abdulhamid***
*Andijan State Medical Institute*

**Abstract:** Pelvic inflammatory diseases (PID) are second in the structure of gynecological morbidity. It is reliably proven that PID develops against the background of a disturbed immune balance, often complicated by the adhesion process in the pelvic area.

**Keywords**: infertility, endoscopy, reproductive surgery, microsurgery, pelvic disease.

## Introduction

The main method of prevention is the choice of an effective and safe method of treatment. Preoperative preparation aimed at compensating for the patient's condition and the use of antiadhesion barriers and solutions are of great importance. Prevention of adhesions after surgery includes early patient activity. This active role of the patient is crucial in preventing adhesions. On the second day after the intervention, it is necessary to turn over in bed and take deep breaths with the participation of the abdominal muscles. Meals should be fractional. After the sutures are removed, therapeutic exercises are necessary to prevent adhesion and fusion of tissues. It is important to take measures to boost immunity, as well as get rid of bad habits, and move more.

Adhesions in the pelvis (plastic pelvic peritonitis or adhesion disease) is the formation of connective tissue cords, adhesions, and films between the pelvic organs and/or the inner lining of the peritoneum (serous membrane covering the abdominal cavity). The disease is found in one in four women of reproductive age. Adhesions provoke displacement of internal organs, chronic pain, infertility, and intestinal dysfunctions. The disease is prone to relapses and, therefore, requires long-term and complex treatment.

Adhesions in plastic pelvioperitonititis are formed in response to irritation of the peritoneum – temperature, mechanical, or inflammatory. The provoking factor is often gynecological interventions and inflammatory processes. After repeated surgeries, the risk of adhesions increases. After the third surgery, adhesions are found in almost 96% of patients. By overgrowing connective tissue, the body responds to inflammatory changes. It has been proven that immune imbalance plays a role in the development of the disease. Due to adhesions, a protective reaction is realized. In essence, the body tries to delimit inflammatory changes in order to prevent them from spreading in the abdomen.

Types of adhesions in the pelvis Depending on the peculiarities of the course of the pathology, the following forms are distinguished:

- acute (vivid symptoms with severe pain, high body temperature, chills, nausea, low blood pressure);
- chronic (practically not manifested clinically; a woman notes non-intense pain in the lower abdomen, constipation, and difficulties with pregnancy);

ISSN 2181-3187

•intermittent (phases of exacerbation are replaced by phases of remission; when the process is exacerbated, the patient experiences rather intense pain and intestinal disorders, while in remission, there are practically or no manifestations of the disease at all).

There are 3 degrees of pelvic adhesions, determined by laparoscopy:

I – there are single thin adhesions that do not impede the movement of the egg;

II – synechiae are dense, covering up to 50% of the ovarian surface, preventing the egg released from the ovary from entering the fallopian tube;

III – adhesions are dense, numerous, cover more than half of the ovary, change the position of organs or cause their deformation.

Symptoms of pelvic adhesions

The main sign of adhesions in the small pelvis is a chronic pain syndrome of various localization, intensity, and nature of discomfort. Patients complain of aching or pulling pain in the lower abdomen, radiating to the iliac region, pubis, vagina, perineum, rectum, and lower back. In the acute course, the pain is intense, aggravated by changing the position of the body, physical exertion, and lifting weights. In chronic adhesions, discomfort occurs abruptly, more often when lifting the trunk, and quickly disappears. Other symptoms include increased discomfort before and during menstruation and during sexual intercourse. If the adhesion process affects the intestines, patients complain of: It hurts in life; Frequent bowel movements or constipation transient flatulence; Pain during bowel movements.

Discomfort increases before and during menstruation and during sexual intercourse. If the adhesion process affects the intestines, patients complain of:

•It hurts in life;

•Frequent bowel movements or constipation

•transient flatulence;

•Pain during bowel movements.

The spread of synechiae to the pelvic organs is accompanied by signs of structural and functional disorders. Menstrual irregularities, infertility, and miscarriage are possible. Prevention of adhesions during surgical interventions on the pelvic organs remains one of the important areas of modern operative obstetrics and gynecology. This is due, firstly, to the high incidence of tubal-peritoneal infertility in the structure of gynecological diseases, and secondly, to the deterioration of the quality of life of patients due to the occurrence of pain syndrome and an increase in the risk of repeated operations. The formation of adhesions is a local response that occurs due to the effect on the peritoneum. With balanced healing processes, the peritoneum is restored, and when the balance is disturbed, adhesions are formed. Factors that can cause imbalance are generally recognized as chrome and catgut sutures, tension of the peritoneum, and blood clots, i.e., almost all integral stages of surgical intervention in obstetrics and gynecology.

In recent years, the use of various anti-adhesion barriers in the course of surgical interventions has been widely discussed in the literature. Clinical cases of the use of the ColGAR anti-adhesion barrier (membrane) in various situations in obstetrics and gynecology are described below. Patient I., 34 years old, with a pronounced adhesion

ISSN 2181-3187

process in the small pelvis and an incomplete scar on the uterus after two cesarean sections, was delivered surgically in a clinical obstetric institution in Omsk. The inferiority of the scar was manifested by its thinning to 0.5 mm in the area of the left corner of the wound on the uterus for 3 cm. In connection with the further reproductive plans of the woman in labor, it was decided to use the anti-adhesion barrier KolGAR. The collagen membrane was fixed with sutures in the wound area of the uterus after matching the edges prior to peritonization. After that, the adhesions were dissected in a blunt and sharp way between the leaves of the parietal and visceral peritoneum, the bladder, the greater omentum, and the area of the uterine appendages on two sides. In the postoperative period, an ultrasound of the pelvic organs was performed on the 2nd, 5th, and 8th days. And two-handed/bimanual examinations in one month. After surgery. There are no signs of the inferiority of the scar on the uterus; on the contrary, it seems that a full-fledged scar is formed, despite 3 cesarean sections. I did not visit a gynecologist; an ultrasound was not performed. In 2020, she applied for the absence of pregnancy for two years with a regular sexual life with one sexual partner (examined: normozoospermia).

The following examinations were carried out:

- somatically healthy;
- hormonal status
- no peculiarities;
- ovulatory cycle;
- sexually transmitted infections
- no detected infections;
- hysterosalpingography (HSG)
- fallopian tubes are patency. Peritubar adhesions are not excluded;
- Ultrasound – the body of the uterus is of normal size.

The myometrium is homogeneous. Along the posterior wall (on a broad base), there is a subserosal myomatous nodule 8.9x7.2 cm. There are no signs of malignancy. The ovaries are of average size. In the right ovary, there is a corpus luteum. Taking into account infertility, pregnancy planning, a high probability of adhesions after chlamydia, HSG data (peritubular adhesions are not excluded), subserosal localization of the myomatous node and the available conditions for myomectomy by endoscopic access (technical equipment, qualification of the surgeon), it was decided: to perform laparoscopy, adhesiolysis, myomectomy, suturing of the node bed. In order to prevent adhesions in the postoperative period (large wound surface on the uterus, existing peritubular adhesions) and to restore and preserve reproductive function, use the anti-adhesion barrier KolGAR. Area of application: application of the anti-adhesion barrier KolGAR to the posterior wall of the uterus in the area of the suture.

Kolgar's membrane was inserted into the abdominal cavity through an 11 mm trocar. The manipulations lasted about 3 minutes and were uncomplicated. Thus, the use of the KolGAR anti-adhesion barrier is convenient, characterized by a high safety profile (no allergic and purulent inflammatory complications were noted during the follow-up), and can be recommended for widespread use in obstetric and gynecological practice. Practical experience shows that the membrane can be moistened with a saline

ISSN 2181-3187

solution, and additional incisions can be made before application. These manipulations contribute to the best application of it.

There are 3 degrees of pelvic adhesions, determined by laparoscopy:

I – there are single thin adhesions that do not impede the movement of the egg;

II – synechiae are dense, covering up to 50% of the ovarian surface, preventing the egg released from the ovary from entering the fallopian tube;

III – adhesions are dense, numerous, cover more than half of the ovary, change the position of organs or cause their deformation.

**References:**


1. Dubrovina S.O. Prevention of peritoneal adhesions in operative gynecology / S.O. Dubrovina // Gynecology. 2012. T. 14. № 6. P. 46–50.
2. Kondratovich L.M. Fundamentals of Understanding the Formation of Adhesions in the Abdominal Cavity. Intraoperative prophylaxis with anti-adhesion barrier preparations / L.M. Kondratovich // Bulletin of new medical technologies. 2014. T. 21. № 3. P. 169–173.
3. Totchiev G.F. Spike Disease: Physiological Aspects, Prevention Mechanisms / G.F. Totchiev // Effective Pharmacotherapy. 2013. № 28. P. 18–20.
4. Gasparov AS, Dubinskaya ED. Pelvic peritoneal adhesions: etiology, pathognesis, diagnosis, prevention. Moscow: Medical Information Agency, 2013. / Gasparov AS., Dubinskaia E.D. Tazovye peritoneal'nye spaiki: etiologiia, patognenez, di-agnostika, profilaktika. M: Meditsinskoe informatsionnoe agentstvo, 2013. [in Russian]
5. Ruff, S. M., & Tsai, S. (2024). Use of diagnostic laparoscopy and peritoneal washings for pancreatic cancer. *Surgical Clinics of North America*. https://doi.org/10.1016/j.suc.2024.05.004
6. Huang, B., Rampulla, V., Ri, M., Lindblad, M., Nilsson, M., Rouvelas, I., & Klevebro, F. (2024). Staging laparoscopy with peritoneal lavage to identify peritoneal metastases and free intraperitoneal cancer cells in the management of locally advanced gastric cancer. *European Journal of Surgical Oncology*, 108059. https://doi.org/10.1016/j.ejso.2024.108059
7. Comba, C., Karakas, S., Erdogan, S. V., Demir, O., Şimşek, E., Karasabanoglu, F., Demirayak, G., & Ozdemir, I. A. (2024). TRANSVAGINAL NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (VNOTES) RETROPERITONEAL SENTINEL LYMPH NODE BIOPSY COMPARED WITH CONVENTIONAL LAPAROSCOPY IN PATIENTS WITH ENDOMETRIAL CANCER. *Surgical Oncology*, *55*, 102099. https://doi.org/10.1016/j.suronc.2024.102099
8. Luo, Z., Li, J., & Xiao, B. (2024). Laparoscopy-assisted ultrasound-guiding percutaneous nephrolithotomy for the treatment of stones in the pelvic ectopic kidney: A case report. *Urology Case Reports*, *53*, 102654. https://doi.org/10.1016/j.eucr.2024.102654
9. Fu, J., Zhou, L., & Ma, T. (2023). The role of laparoscopy in closed abdominal injury. *Heliyon*, *9*(10), e20705. https://doi.org/10.1016/j.heliyon.2023.e20705
10. Wang, J., Xu, Y., Zhang, Y., & Tian, H. (2023). Safety and effectiveness of fluorescence laparoscopy in precise hepatectomy: A meta-analysis. *Photodiagnosis and Photodynamic Therapy*, p. *42*, 103599. https://doi.org/10.1016/j.pdpdt.2023.103599