

## Modern Solutions of Diagnostic and Therapeutic Tactics in Patients with Endometritis After Caesarean Section

**Yunusova Aziza Rakhmatilloevna**  
Samarkand State Medical University  
Department of Obstetrics and Gynecology 1

**Abstract:** In modern obstetrics, the technique of single-row suture is preferred, with fragmented fixation according to Reverden (woven suture) at the corners of the incision and in the center. Its advantages are clear: there are fewer sutures, tissue trophism is not disturbed, the duration of the operation is reduced, and the amount of blood loss is reduced [1, 2, 28].

One of the options for suturing the incision in the uterus can be a two-row suture: the first row is a continuous, furry (Schmieden), mucomuscular suture (the first suture is applied to the corner of the cut through the mucous membrane. With the removal of the knot into the lumen of the uterus, the membrane and muscle layer and puncture - in the middle of the muscle layer); the second row is muscular and continuous.

**Key words:** Modern solutions to the problem, postpartum rehabilitation, rehabilitation in women who have undergone cesarean section.

Probably suturing the uterine incision with a continuous mucomuscular suture. Currently, interrupted and continuous sutures are used for suturing the uterus, which are applied in one or two rows - in this case, great attention should be paid to connecting all layers of the wall to create a tight suture [30].

The choice of suture material is not important [30, 58].

Catgut, which was widely used in the past and was created by Joseph Lister in 1868, does not meet modern requirements due to its rapid loss of strength and ability to cause allergic and inflammatory reactions in tissues [28, 32, 33, 34].

Today, the requirements for the suture material are as follows: it should be sterile, non-reactive, durable, absorbable, universal and convenient for the surgeon [22, 28]. Dexon, Maxon, Vicryl, Monocryl, Polysorb, Polyester, Polyamide, Prolene, Mercilene and Caproag have these qualities.

Peritonization of the suture in the uterus is carried out by the uterovesical fold of the peritoneum using a continuous suture with vicryl thread [22, 27]. An abdominal examination is then performed, the uterine appendages are examined, and hemostasis is assessed.

The toilet of the abdominal cavity, vesicouterine cavity, retrouterine cavity and lateral abdominal canals is performed with sterile gauze [1, 2]. Then the anterior abdominal wall is sutured in layers. At the end of the operation, urine is removed with a catheter, blood clots are removed from the vagina, the uterus is carefully massaged with your hand through the anterior abdominal wall, and the placenta is examined.

According to Russian authors, the average blood loss during cesarean section ranges from 500 to 1000 ml [27, 32, 33, 34, 60, 61]. To date, there are no generally accepted methods for determining the amount of blood loss. The most common in practice is the gravimetric method. Often, the amount of blood loss is determined visually [3, 60, 61].

According to some authors, the average time from the beginning of the operation to the removal of the child should not exceed 8 minutes, and the time from the cutting of the uterus to the birth of the child should not exceed 3 minutes [21, 27, 54]. ]

In addition to the improvement of surgical techniques, a major achievement in the implementation of cesarean section is the development and implementation of regional anesthesia, which eliminates the serious complications inherent in general anesthesia. Epidural anesthesia is used for a planned cesarean section, which takes effect in 10-15 minutes. In case of emergency surgery, spinal anesthesia is performed [37].

Caesarean section is a common operation in all developed countries of the world. In recent years, the frequency of breech birth has increased significantly, which is the expansion of indications for cesarean section in the interests of the fetus; introduction of modern diagnostic methods of studying the state of the mother and fetus into obstetric practice; improvement of intensive therapy for newborns, emergence of new broad-spectrum antibiotics; new types of suture material [64].

Despite modern diagnostic methods, active antibacterial prophylaxis and treatment of complications, the use of high technologies during cesarean section, purulent-inflammatory diseases remain a frequent and dangerous complication [51, 52, 53, 54, 56].

The frequency of postoperative infectious complications is 13.3-75% and reaches 80.4-85% in women with a high risk of developing septic complications [27, 61].

A common complication after cesarean section is endometritis. Its frequency is from 6.6 to 45% [3, 17, 18, 19, 32, 33, 34, 36, 37, 38, 51, 52, 53, 54].

Blood clots in the uterine cavity after surgery, remnants of necrotic decidual tissue, as well as local changes associated with damage to the uterus during surgery (edema, tissue ischemia, the presence of microhematomas in the suture area, suture material) predisposition are the determining factors. to create a favorable environment for the development of complications and the growth of microorganisms in the uterus, especially their obligate anaerobic species [61].

Various factors play a role in the development of endometritis. The contingent of pregnant women and postpartum women has changed - severe extragenital diseases, various forms of infertility, hormonal and surgical correction of pregnancy, patients with chronic viral and bacterial infections of various localizations, the risk of developing infectious diseases belongs to the higher group. complications [51, 52, 53, 54].

Obstetrical complications play an important role in the occurrence of endometritis - a long waterless interval, impaired contractile activity of the uterus, prolonged labor, soft tissue damage, pathological blood loss, improper use of uterine contraction agents , the presence of the pathogen. and conditionally pathogenic microflora [32, 33, 34, 50].

In recent years, the causative agent of postpartum infections has changed. Long-term, sometimes unsystematic and irrational use of antibiotics led to the selection of multi-resistant strains of microorganisms, which was one of the reasons for the increase in the frequency and severity of postoperative purulent-septic diseases. The virulence of a number of microorganisms, such as staphylococci and *Escherichia coli*, is significantly increased [29, 30, 51, 52, 53, 54].

Endometritis flora is polymicrobial in most cases. In postpartum women with endometritis (41%), the species composition of aerobic microorganisms showed increased enterococci and less common *Klebsiella* and *Proteus*. *Escherichia coli* dominates among them (40%) [51, 52, 53, 54].

Diseases caused by group V streptococci are characterized by a very severe course [29, 30, 46, 51, 52, 53, 54].

In the presence of facultative aerobic microorganisms, especially *Escherichia coli*, the pathogenicity of anaerobes has been determined. With this association of pathogens, severe forms of postoperative endometritis are observed [17, 18, 19].

Potentially pathogenic pathogens, both gram-positive (*Staphylococcus aureus*, streptococci) and gram-negative (*Escherichia coli*, *Proteus*, *Salmonella*, Enterobacteriaceae), aerobic bacteria are the common cause of the disease and are detected in 42-62% of cases [29], 30].

In recent years, the role of chlamydia, mycoplasma, viruses and other microorganisms transmitted not only sexually has increased in the etiology of postpartum infection. According to the literature, mycoplasmas are from 30 to 76%, yeast-like fungi from 25.8%, chlamydia from 2 to 7% [17, 29, 30, 46, 51, 52, 43].

The main ways of spreading endometritis infection:

- a) rising (through the birth canal);
- b) hematogenous (from foci of chronic infection);
- c) lymphogenous (through incisions in the uterus and infected cervical cracks);
- d) intraamniotic, associated with the use of invasive research methods in obstetric practice (cordocentesis, embryo reduction in multiple pregnancies, etc.) [25, 51, 52, 53].

Surgical intervention with all its negative components - fear, pain, trauma, the effect of anesthetics and other factors - means a clear external attack on the balanced functional systems of the body, among which neurohumoral regulation occupies one of the important places [31].

It is known that the body's response to any aggression, including the impact of microorganisms, is related to immunity. Currently, it is believed that the body's defense is determined by non-specific factors and immunological reactivity or immune response [8, 51, 52, 53, 54].

Changes in immunological reactivity during pregnancy include the following processes: moderate non-specific inhibition of the mother's general immunoreactivity due to the effect of gonadotropic hormones and temporary involution of the thymus gland; active recognition by the mother of fetal antigens inherited from the father; various general and local immunosuppressive mechanisms [8, 32, 33].

At the same time, even when there is an infection in the birth canal and with physiological immune deficiency, postpartum infectious diseases do not occur in all cases. This requires high virulence of the

microorganism, immunodeficiency in the postpartum woman, and other factors.

Undoubtedly, the surgical intervention itself, as a form of aggression and stress, leads to the suppression of the immune system. Surgical stress is manifested by functional changes in the state of all organs and systems of the female body. First of all, these changes are associated with the reconstruction of the activity of the hypothalamus-pituitary-adrenal system, which ensures the synchronization of the homeokinetic reactions of the whole organism and the specificity of the first (catabolic) and second (anabolic) phases. the postoperative period. The catabolic phase (12-14 days after surgery) is characterized by significant changes in the cardiovascular and respiratory systems, sympatho-adrenal and immune systems, as well as protein, fat and carbohydrate metabolism, water-electrolyte and ion balance. . ]].

A characteristic feature of the first day of the postoperative period is a decrease in circulating blood volume and hypovolemia of oligocythemia, which turns into hypervolemia on the third day and only on the seventh day, reaching the initial volumes [42, 43].

Hood DD (2010) proved that anesthetics inhibit the activity of immunocompetent cells. Within 4-24 hours after cesarean section, lymphopenia develops without changing the ratio of T- and B-cells and IL-2 production is impaired [53].

The studies showing the possibility of formation of interleukins (IL-1b, IL-6, IL-8) in amniotic and chorionic layers of fetal membranes, decidual and placental cells, as well as endothelial cells are particularly noteworthy. of umbilical arteries [8, 12, 31].

In the case of increased infection of the amniotic environment, an increase in the concentration of IL-6 in the cervical mucus and amniotic fluid has been proven to be of high diagnostic value. Women with higher levels of IL-6 in their cervical mucus have a higher susceptibility to perinatal morbidity and mortality. The determination of IL-6 levels in the mother's blood plasma was equally effective. When the level of IL-6 in the blood of pregnant women increased, various infectious complications appeared in 75% of cases in the postpartum period [31, 59].

A reliable criterion for diagnosing endometritis and a test for predicting the outcome of the disease TE Belokrinit'skaya and Yu.A. Vitkovsky (1999) [8, 12, 31].

There are many simple and reliable methods for early diagnosis, prognosis, assessment of the severity of the inflammatory process and the effectiveness of treatment of patients.

These include cytomorphological examination of the contents of the placenta and uterine cavity [60, 61]; Determination of pH, pCO<sub>2</sub>, pO<sub>2</sub>, uterine contents [51].

Methods for the determination of endotoxins in blood serum and lochia have diagnostic advantages. Determination of PDT in postpartum women can serve as a criterion for the effectiveness of treatment of postpartum endometritis [17].

The literature shows that antibiotics are often prescribed as preventive measures for various postoperative complications [26, 27]. For the prevention of endometritis, many schemes of antibiotic use, different doses and methods of administration - short and ultra-short courses have been proposed [1, 2].

3-5 days before surgery, prevention of endometritis after cesarean section in women with a low risk of developing purulent inflammatory diseases, sanitization of genital tract with antiseptic solutions without antibiotics [39, 41].

The use of modern technologies for childbirth allows to manage the postpartum period without the use of antibiotics, which expands the possibilities of natural nutrition and prevents the negative effects of antibacterial drugs on the body of the mother and the child [53, 54]. .

A number of authors suggest the widespread use of uterine cavity and abdominal irrigation during cesarean section to reduce purulent inflammatory diseases with antiseptic solutions or vacuum aspiration in postpartum women with endometritis. . the degree of bacterial contamination increases by 4-6 degrees, increasing the number of CD3+ T-lymphocytes, CO4+ T-helpers and increasing the immunoregulatory index (CD4+/CD8+), increasing the body's protective power [20, 21, 37, 39, 40].

Some authors [53] believe that the use of multicomponent ointments on a hydrophilic basis is also promising for the prevention and treatment of endometritis.

At the same time, the risk of superinfection due to allergic reactions, side effects, selection of resistant microorganisms and variable effectiveness of antibiotics should be taken into account [17, 53].

The morphological manifestations of acute chorioamnionitis are not related to the duration of labor, the duration of the waterless interval and the appointment of antibacterial therapy, which indicates the complexity of the pathogenesis of the inflammatory process that occurs in the placenta during the rise of amniotic infection. environment [15].

In addition, there is information about a decrease in immunity under the influence of antibiotics [17, 21].

In this regard, along with antibacterial therapy, other methods of preventing endometritis after cesarean section are being sought. These are intraoperative use of polymer films with antibiotics [53], technology improvement and modification of cesarean operation; use of minimally invasive surgical methods; reduce the duration of surgery and blood loss; use of modern synthetic absorbable suture materials and atraumatic needles [29, 30]; local vaginal hypothermia [56]; aspiration and lavage drainage of the uterine cavity [24]; hyperbaric oxygen therapy [40]; immobilized proteolytic enzymes [51]; medical ozone in postpartum women [19, 39]; phototherapy, laser exposure [7], microwave therapy with decimeter waves [60, 61]. Physical methods improve blood supply and tissue trophism, which helps to reduce swelling and accelerate tissue recovery [39].

Studies on the use of quantum hemotherapy for the prevention and treatment of purulent-inflammatory complications in postpartum women are of interest [26].

Recently, the treatment of postpartum endometritis has been considered from the point of view of treating infected wounds and includes timely surgical treatment of the wound and adequate antibacterial therapy. Surgical treatment of the "obstetric wound" for postpartum endometritis includes curettage of the uterine walls or vacuum aspiration of the contents or aspiration and lavage of the uterus [36, 37, 38].

However, the recommended methods do not always prevent the development of purulent-septic complications, which encourages the search for highly effective methods of treating postpartum endometritis.

In this regard, the "enzymatic curettage" of the uterine walls after childbirth, proposed by MA, is promising, effective and economical. Kupert et al. used proteolytic enzymes (Profezim) in the complex treatment of postpartum endometritis with the intrauterine administration of Profezim, and it is pathogenetically proven and acceptable for the treatment of postpartum endometritis, as the treatment efficiency increased by 17.5%. increases, shortens the days of hospital stay of patients by 25.8% and reduces complications by 8.3 times compared to traditional treatment methods [36, 37, 38].

**List of used literature:**

1. Andryev S. et al. Experience with the use of memantine in the treatment of cognitive disorders //Science and innovation. – 2023. – T. 2. – №. D11. – C. 282-288.
2. Antsiborov S. et al. Association of dopaminergic receptors of peripheral blood lymphocytes with a risk of developing antipsychotic extrapyramidal diseases //Science and innovation. – 2023. – T. 2. – №. D11. – C. 29-35.
3. Asanova R. et al. Features of the treatment of patients with mental disorders and cardiovascular pathology //Science and innovation. – 2023. – T. 2. – №. D12. – C. 545-550.
4. Begbudiyev M. et al. Integration of psychiatric care into primary care //Science and innovation. – 2023. – T. 2. – №. D12. – C. 551-557.
5. Bo'Riyev B. et al. Features of clinical and psychopathological examination of young children //Science and innovation. – 2023. – T. 2. – №. D12. – C. 558-563.
6. Borisova Y. et al. Concomitant mental disorders and social functioning of adults with high-functioning autism/asperger syndrome //Science and innovation. – 2023. – T. 2. – №. D11. – C. 36-41.
7. Ivanovich U. A. et al. Efficacy and tolerance of pharmacotherapy with antidepressants in non-psychotic depressions in combination with chronic brain ischemia //Science and Innovation. – 2023. – T. 2. – №. 12. – C. 409-414.
8. Karshiyev Z. et al. The degree of adaptation to psychogenic effects in social life in patients with psychogenic asthma //Science and innovation. – 2023. – T. 2. – №. D11. – C. 295-302.
9. Konstantinova O. et al. Clinical and psychological characteristics of patients with alcoholism with suicidal behavior //Science and innovation. – 2023. – T. 2. – №. D11. – C. 399-404.
10. Konstantinova O. et al. Experience in the use of thiamine (vitamin B1) megadose in the treatment of korsakov-type alcoholic encephalopathy //Science and innovation. – 2023. – T. 2. – №. D12. – C. 564-570.
11. Kosolapov V. et al. Modern strategies to help children and adolescents with anorexia nervosa syndrome //Science and innovation. – 2023. – T. 2. – №. D12. – C. 571-575.
12. Farrukh S. ORGANIZATION OF DIGITALIZED MEDICINE AND HEALTH ACADEMY AND ITS SIGNIFICANCE IN MEDICINE //Science and innovation. – 2023. – T. 2. – №. Special Issue 8. – C. 493-499
13. Yunusova A., Zakirova F. THE EFFECTIVENESS OF OZONE THERAPY IN THE TREATMENT OF CHRONIC ENDOMETRITIS //Молодой исследователь: вызовы и перспективы. –2020. –C. 443-445.8.
14. Kamarova I., Yunusova A., Abdisayitova C. MODERN ASPECTS OF REHABILITATION OF WOMEN WITH POSTNATAL PERINEAL INJURIES //Science and innovation. –2022. –T.1. –No. D8. –C. 641-646