



## POSTPARTUM REHABILITATION OF PATIENTS THAT HAVE SUFFERED LOSS-SAVING SURGERY – METRORAPHY AND METROPLASTY

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Article history:	Abstract:
<p><b>Received:</b> January 4<sup>th</sup> 2022 <b>Accepted:</b> February 4<sup>th</sup> 2022 <b>Published:</b> March 12<sup>th</sup> 2022</p>	<p>Despite the favorable outcomes after metroplasty and metrorrhaphy (secondary suturing), this surgical intervention should not be recommended for general widespread implementation. Given the complexity of the operation involving surgeons, preoperative intensive care for genital sepsis, a very complex and long stage of nursing and rehabilitation of this contingent of women, such surgical tactics can only be applied in the conditions of Obstetric complexes and Level 3 Perinatal Centers, as well as multidisciplinary clinics (clusters), with well trained medical staff.</p>

**Keywords:** Metroplasty, metrorrhaphy, caesarean section, genital sepsis, postpartum rehabilitation.

For the first time, the results of organ-preserving treatment of puerperas with obstetric peritonitis against the background of uterine suture separation after CS were presented by M. Rivlin et al. in 2004 [8,9]. The authors described 3 observations, in 2 of which excision of necrotic areas of the myometrium and restoration of the integrity of the uterus were performed, and in one case - hysterectomy.

According to the results of the III confidential analysis of cases of maternal death (MC) for 2016 - 2017. (KISMIS) "In the name of saving the life of mothers", the cause of MS from genital sepsis was 14.7%, and according to various authors, the incidence of purulent-septic complications of the n / child period varies from 1 - 54.38% [56.62].

For postpartum patients who have undergone complicated surgical delivery by caesarean section, utero-preserving reconstructive surgeries (metrorrhaphy and metroplasty) allow maintaining the quality of life, especially for primiparas, as it prevents the development of a number of complications associated with the removal of the uterine organ, which is not only a fertile organ, but and involved in the process of hormonal regulation in women.

It is known that the uterus is a target organ for various hormones and its removal leads to endocrine changes in a woman's body, which can lead to the development of neoplasms and neurovegetative disorders [1,6,7]. The absence of the uterus as a hormone-consuming organ removes the "consumption stimulation phenomenon", as a result of which other target organs continue to be further exposed to even greater ovarian influence [3,5,8].

According to a number of authors, hysterectomy leads to synchronous dyshormonal damage to the organs of

the reproductive system, the so-called hormonal impact (gonadotropic and steroid hormones) on hormone-dependent receptors of the mammary glands, ovaries, cervix and cervical canal [2,4]. In addition to endocrine disorders (early severe menopause, cyst formation, and others), surgical trauma, adhesive disease, complications from anesthesia, the development of various somatic diseases. When an organ of the reproductive system is removed, a woman undergoes psychological trauma (divorce, depression, mental disorders, guilt), especially if hysterectomy is performed on primigravid women who are at the peak of childbearing, and even in combination with antenatal fetal death. In this connection, since 2017, in the Republican Perinatal Center of the Republic of Uzbekistan, organ-preserving (loss-preserving) reconstructive operations have been carried out - the application of secondary sutures (Metroplasty and Metrorrhaphy) in case of failure (divergence) of sutures (scar) on the uterus after a cesarean section, complicated by the clinic of Genital pelvic sepsis, thus giving a chance for the subsequent preservation of the reproductive function of young women, especially primiparas.

We have developed methods of postpartum rehabilitation, including a whole range of programs for the treatment and adaptation of women after undergoing complex organ-preserving operations. Postpartum rehabilitation is a complex of treatment and preventive procedures aimed at restoring the physical and psychological health of a woman after a complex organ-preserving operation and requires a thorough recovery period with the involvement of a general practitioner and narrow specialists, such as a urologist, gastroenterologist, endocrinologist, neurologist,



cardiologist, rehabilitation specialist, psychotherapist, psychologist, physiotherapist and physiotherapist. At the same time within 6-12 months. Patients who have undergone organ-preserving operations are observed in the follow-up room at the Polyclinic. These patients after surgical treatment require strict contraception during the first two years. And only after a complete examination and assessment of the condition of the scar on the uterus, pregnancy planning is possible. In the future, we recommend delivery by the CS method, which is an absolute indication for a caesarean section. The discharge of patients was carried out taking into account the general condition on the 7-10-14th day after relaparotomy. When carrying out rehabilitation measures, decompensation of chronic somatic pathology has a significant impact on the outcome, with pyelonephritis (46.7%), diseases of the gastrointestinal tract (23.3%), lungs (16.7%), CVD (13.3%). A special place is occupied by chronic and posthemorrhagic anemia, as a rule, the frequency of which in our studies was 100%. Treatment and correction of somatic diseases occupy an important place in the positive outcome of organ-preserving operations.

20.0% (6) women were discharged in a satisfactory condition for outpatient observation on days 5-7, 26.7% (8) on days 10-16, and 53.3% (16) on days 20-40. After discharge from the hospital during the year, the patients were observed in the follow-up room at the Republican Perinatal Center and at the place of residence.

#### **The rehabilitation measures developed by us included 3 stages:**

- Stage 1 - these are inpatient rehabilitation measures, including a period of improvement and positive dynamics of intensive care in the postpartum postoperative period, from the transfer of the patient from the Intensive Care Unit (ICU) to the gynecology department and until discharge from the hospital on days 7-10-14;

- Stage 2 - outpatient care for patients who underwent organ-preserving procedures for the period after discharge for 1, 3, 6 months. They undergo patronage, which includes the process of monitoring the healing of a postoperative wound using ultrasound monitoring, the restoration of hormonal function and regular menstruation, the improvement of the psycho-emotional status, examination by narrow specialists, and the treatment of somatic pathology. Femoston 2/10 is prescribed 2 months after metroplasty, and before that, therapy for the prevention of pulmonary embolism (PE) (venotonics, aspirin) is carried out;

- Stage 3 - observation in the follow-up room (ultrasound monitoring after 6.9 months, 1 year), taking

femoston 2/10 for 9 months, and after 9 months. start taking combined oral contraceptives (COCs), continue as needed, and detect somatic pathology.

- Stage 1 - stationary rehabilitation measures:

- Therapeutic and protective regime

- Continue taking antibiotics, according to a combination of 3 antibiotics developed by a council of doctors, followed by a gradual withdrawal of antibiotics to monotherapy for 7-10 days.

- After the operation, a woman can already start to get up a little, but the hourly interval is developed strictly individually, depending on the state of severity of the surgical intervention and the patient's condition. Active management of the postoperative period and movement (activation) is a good way to start the natural recovery processes in the body and avoid a number of consequences of surgery, in particular, the appearance of adhesions, which very often accompany septic complications after cesarean section.

- Sanitation of the postoperative wound, we recommend a solution of 3% hydrogen peroxide, then Forgals or betadine, or chlorhexidine-containing solutions. If there is a divergence of the seams on the skin, then the wound was sanitized as much as possible, the edges of the wound were cleaned, and then a napkin with a solution of betadine was laid, and after cleansing the wound of pus and fibrin plaque, to speed up the repair process, ointments with levomicol and offlamelide were applied every two to three days, until complete secondary healing (tightening) of the wound on the skin.

- Lavage of the uterus - instillation with an antiseptic solution, treatment of the cervical canal (in our case, erythromycin ointment), or antibiotic ointment, it is recommended to introduce antibiotics into the cervix. Antimicrobial multicomponent suppositories and suppositories with estrogens for 7-10 days.

- Taking direct anticoagulants - low molecular weight heparins within 2 weeks after surgery, for the prevention of pulmonary embolism and postpartum thrombophlebitis under hemostasiogram control, in combination with aspirin, elastic bandaging of the legs with compression stockings - phlebotomy. With the subsequent appointment of venotonics, diosmin.

- Immunotherapy - used factors of humoral immunity - immunoglobulins - antistaphylococcal gammaglobulin 3-5 doses after surgery, pentoglobulin, anticytokines (Galavit). Fresh frozen plasma (FFP), erythrocyte mass, albumin 10 or 20% - according to indications, intravenously (IV) - human immunoglobulin.

- Antifungal therapy



- • Eubiotics for the first two months to restore the intestinal microbiota. In the vagina - suppositories with probiotics to restore the balance of the vaginal microflora.

- • After 5 days - candles with estrogen in the vagina - a course of 18-20 days.

- • Microclysters with sodium thiosulfate in the rectum.

- • Continue antianemic therapy (use of ferric iron) parenterally.

- • Non-steroidal anti-inflammatory drugs to suppress pain, antipyretic and anti-inflammatory effects in the form of oral tablets, injections or in the form of suppositories.

- • To stop attacks of gastritis and prevent the development of stress ulcers, histamine H2 receptor blockers, proton pump inhibitors, and hepatoprotectors are prescribed.

- Stage 2 - outpatient care for postpartum women in childbirth:

- • Ultrasound - monitoring of uterine involution after discharge for 1,3,6,9 months.

- • After 45 - 60 days of the postpartum period, after passing the coagulogram, start taking Femoston 2/10 for 9 months to restore the endometrium, eliminate hormonal dysfunction, and restore reproductive function.

- • Physiotherapy contributes to the structural and functional recovery of the endomyometrium, and is also necessary for the prevention of adhesions. In the physiotherapeutic treatment of the pelvic organs, not only drugs are used, but also pulsed currents, magnetic fields, laser therapy, ultrasound, mud and hydrotherapy. At all stages of therapeutic and rehabilitation measures and prevention, it is recommended to apply physiotherapy as early as possible - from 1-15 procedures, taking into account contraindications.

- • Absorbent therapy and fibrinolytic agents (suppositories Longidase 50mg, Distreptase) have hyaluronidase (enzymatic, proteolytic) activity of prolonged action, chelating, antioxidant, immunomodulatory and moderately pronounced anti-inflammatory properties, antifibrotic properties, weakens the course of the acute phase of inflammation, increases the humoral immune response and resistance body to infection. Proteolytic serratopeptidases.

- • Aspirin is prescribed at a dosage of 75-150 mg in combination with aspirin (50.80 mg), depending on body weight and under the control of a coagulogram, within 2 months - as a prevention of pulmonary embolism and postpartum thrombophlebitis, venotonics are prescribed.

- • Continue taking eubiotics for 1-2 months, and to restore the biocenosis and microbiota of the vagina, suppositories with probiotics (bioselac, acilact).

- • Continue antianemic therapy (use of ferric iron) orally, the course is individual.

- • Vitamins and immunity regulators (to restore immune balance)

Stage 2 - observation in the Catamnesis office:

- • After taking Femoston 2/10 for 9 months, contraception is prescribed with combined oral contraceptives (COCs) for 6-9 months, sometimes from a year to 1.5, after which pre-gravid preparation is prescribed.

- • Spa treatment after 4-6 months, includes balneotherapy and mud therapy.

- • Ultrasound monitoring: folliculometry, measurement of the thickness of the endometrium, the area of the postoperative scar, conducting dopplerometry for pregravid preparation.

Of the 31 operated women of the main group, menstruation was restored after 1 month in 2 (6.4%), after 3 months - in 4 (12.9%), after 5-6 months - in 21 (67.7%), after 8- 10 months - in 3 (9.6%) and after 12 months - in 1 (3.2%).

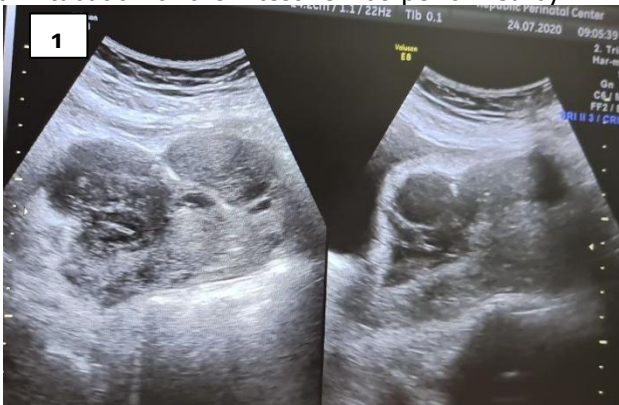
The timing of recovery of menstrual function in women of the comparison group did not differ from the data of the main group. Pregnancy occurred in 15 (50.0%) women, of which 6 (20.0%) were diagnosed with non-developing pregnancy in the period of 6-8 weeks and medical abortion was performed. In 8 (26.7%) women, pregnancy progresses in terms of 18-30 weeks while taking utrogestan 200 mg 2 times a day vaginally, and 1 (3.2%) patients at 36 weeks of gestation underwent emergency delivery by caesarean section, extracted live full-term newborn weighing 3000 g, length 49 cm on the Apgar scale 7-8 points.

During the observation period, complications occurred in 2 (6.7%) women. One had synechia formation in the area of the internal pharynx, hematometer 3 months after metroplasty - she underwent hysteroscopy, dissection of synechiae and restoration of the uterine cavity. In another patient, multiple organ failure and a clinical picture of septic shock progressed, SOFA score - 10 points, in connection with which re-relaparotomy and hysterectomy with salpingectomy and drainage of the vaginal stump were performed in 2017.

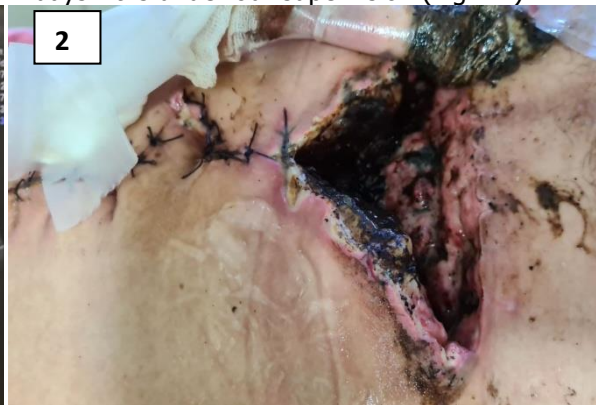
The case of the patient Davranbekova D.21 years, We take 1 39 weeks, 5 days, 1 childbirth, childbirth was complicated by pelvic-head disproportion, the child's weight is 4000 g. Height is 54cm, the postpartum period was complicated by genital pelvic sepsis, obstetric peritonitis on the 5th day comes to our

center in severe condition, there is a divergence of sutures on the skin and on the uterus. A complete clinical diagnostic study was carried out - an assessment on the SOFA scale of -8 points. On an emergency basis, after preoperative intensive therapy for sepsis, a relaparotomy was performed with excision of a scar that had festered on the skin, secondary sutures were applied after necrectomy of a postoperative scar on the uterus, metroplasty and metrorrhaphy were performed, intestinal intubation of the intestine was performed by

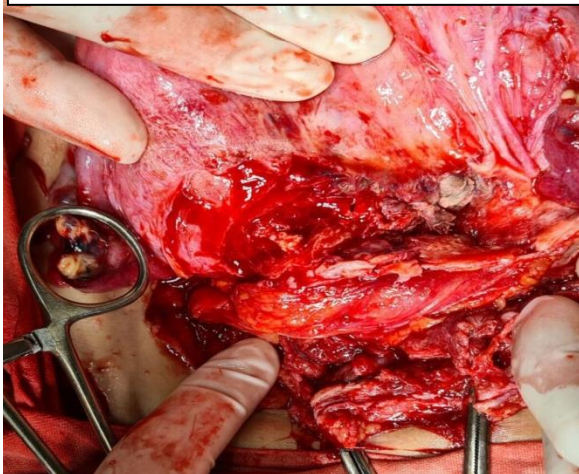
an abdominal surgeon, revision and sanitation of the abdominal cavity, pus was removed in the amount of 1 liter from the abdominal cavity, fibrin plaque over the entire surface of the intestine and uterus. The patient was discharged home on the 14th day, the sutures healed on the skin by secondary intention. The patient went through all stages of rehabilitation, after 1 year and 2 months. after pregravid preparation, pregnancy occurred. At the moment, the period is 13 weeks. 4 days. It is under our supervision (Fig.1-4).



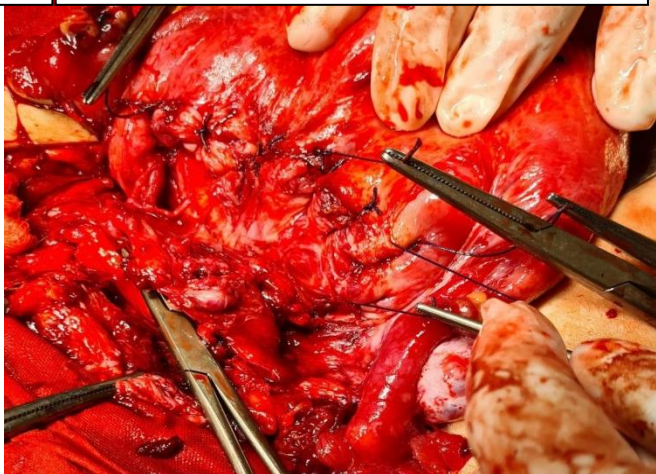
**Fig. 1-**Ultrasound - s-m "niches and hematomas at the sutures - divergence of sutures on the uterus at sutures - divergence of sutures on the uterus, festering



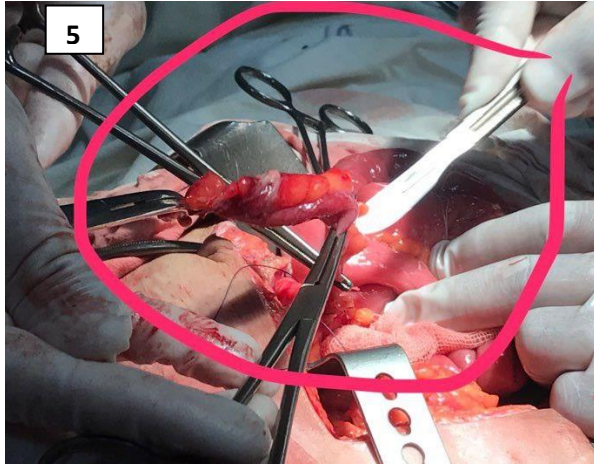
**Fig. 2-**divergence and suppuration after an operating wound on the skin



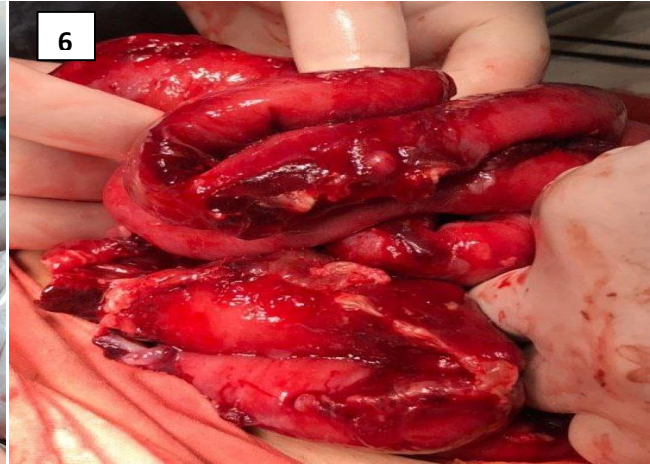
**Fig. 3-**divergence of sutures on the uterus after CS Postpartum period 7 days.



**Fig. 4-**Metroplasty and Metrorrhaphy - the imposition of secondary sutures on the



**Fig. 5** - Postpartum period 5 days - acute purulent-fibrinous appendicitis



**Fig.6** - Postpartum period 6 days - intestinal obstruction - against the background of purulent-fibrinous peritonitis.

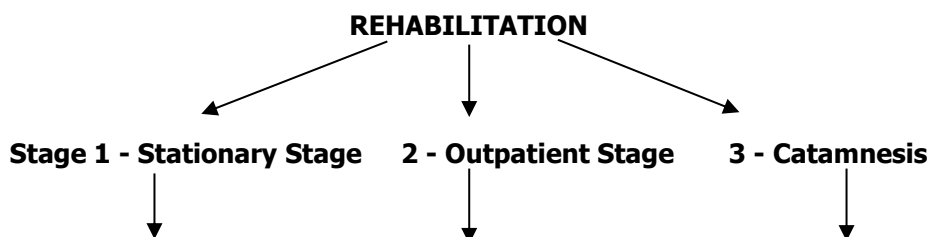
We also performed organ-(utero)-preserving operations in 56 patients with abdominal secondary purulent-fibrinous peritonitis in combination with obstetric peritonitis, the postpartum period was complicated by acute purulent-fibrinous appendicitis and obstetric peritonitis - in three cases 3 (5.3%), in 1 case (1.7%) with intestinal obstruction and in four cases 4 (7.1%) with septic shock, the score on the SOFA scale, in which ranged from 5-10 points (Fig.5-6).

### CONCLUSIONS.

The introduction of innovative technology into obstetric practice in postpartum women who have undergone genital pelvic sepsis - preservation of the uterus in

conditions of uterine sutures diverging after cesarean section and obstetric peritonitis is an effective method in the conditions of a 3rd level obstetric institution, perinatal centers, multidisciplinary hospitals or clusters. The decisive moment in the fate of a woman is the rehabilitation of her health and reproductive function after relaparotomy and secondary sutures with myometrorrhaphy and metroplasty. The algorithm developed by us for managing the patient for 2 years was effective in 85% of puerperas, menstrual function was restored in 100% of women, pregnancy occurred in 40.0%, complications amounted to 15%, of which the organ was removed in 3.3% of cases.

### Algorithm for the rehabilitation of postpartum puerperas, undergoing organ-preserving surgery



<ol style="list-style-type: none"> <li>1. <b>Therapeutic and protective regime</b></li> <li>2. <b>A / biotecotherapy (course 7-10 days i / v)</b></li> <li>3. <b>Sanitation of the postoperative wound and instillation of the uterus</b></li> <li>4. <b>Prevention of PE and postpartum thrombophlebitis</b></li> <li>5. <b>Immunotherapy</b></li> <li>6. <b>Eubiotics and antifungals</b></li> <li>7. <b>Antianemic therapy and vitamin intake</b></li> <li>8. <b>NSAIDs, post-syndromic therapy</b></li> <li>9. <b>Absorbent therapy</b></li> <li>10. <b>Ultrasound - monitoring and dopplerometry of uterine involution</b></li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Prevention of PE and post</b></li> <li>2. <b>Immunotherapy</b></li> <li>3. <b>Eubiotics and antifungals</b></li> <li>4. <b>Antianemic therapy and v</b></li> <li>5. <b>Absorbent therapy</b></li> <li>6. <b>Ultrasound - Doppler mor</b></li> <li>7. <b>Reception of a monophas</b></li> <li>8. <b>After 9 months. Rehabilitation reception COC Physiotherapy.</b></li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Taking a monophasic two-component drug Femoston 2/10 for 6-9 months</b></li> <li>2. <b>After 9 months. Rehabilitation reception COC</b></li> <li>3. <b>Physiotherapy</b></li> <li>4. <b>Spa treatment after 6 months</b></li> <li>5. <b>Ultrasound of the pelvic organs, folliculometry. Diagnosis of possible complications</b></li> <li>6. <b>After a year and a half, pre-gravid preparation for pregnancy</b></li> </ol>
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