

OBSTETRIC SEPSIS

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Introduction and relevance

Obstetric sepsis is the second-leading cause of maternal mortality. It is also the primary cause of severe maternal morbidity (SMM) during both the antepartum and postpartum periods, and the third-leading cause at delivery [1, 2].

The World Health Organization defines obstetric (maternal) sepsis as organ failure caused by infection during pregnancy, childbirth, post-abortion or postpartum period. It is the third most prevalent reason for maternal death. According to statistics, sepsis caused 11 percent of maternal fatalities worldwide [1, 2, 3].

Data from the California Pregnancy Associated Mortality Review (CA-PAMR) committee report estimate that 63% of maternal deaths from sepsis had a good or strong chance to have been preventable. Furthermore, for each maternal death, there are 50 women/birthing people, who experience life-threatening morbidity from sepsis [1].

In the Russian Federation, septic complications rank fifth in the structure of maternal mortality. According to the Ministry of Health of the Russian Federation, the share of septic complications tended to increase in 2018 and amounted to 7.5% in the structure of maternal mortality [1].

According to the Global Study of Maternal and Neonatal Sepsis (GLOSS, 2020), which was conducted in 52 countries, the incidence of maternal infection was 70.4 (95% CI 67.7-73.1) per 1,000 live births, and the incidence of adverse outcomes (severe near-miss obstetric complications and maternal death) was 10.9 (95% CI 9.8-12.0) per 1,000 live births. The highest values were observed in low- and middle-income countries, and the lowest in high-income countries [4].

According to the latest SSC 2026 recommendations, sepsis is defined as life-threatening organ dysfunction caused by an impaired body response to infection (Sepsis-3 concept), and septic shock is defined as the most severe form of sepsis with circulatory failure and a high risk of mortality [5].

Obstetric and Gynecological Sepsis - It most often occurs due to the introduction of infection into the uterus during childbirth, abortion, or acute extragenital inflammatory diseases during pregnancy and childbirth.

Infection during the act of childbirth or abortion (prolonged labor, prolonged waterless interval, birth trauma, retention of parts of the chorion or placenta in the uterus, accumulation of blood, criminal intervention, etc.) contribute to the development of local and then generalized infection [6, 7, 8, 9].

The purpose of the study

To study the possibility of organ-preserving surgery on the uterus in the case of obstetric peritonitis after a caesarean section.

Methodology

Conditions: in-depth clinical and laboratory examination (including dynamic study of sepsis markers and the possibility of microbiological express diagnostics), related specialists, a well-equipped intensive care unit with the possibility of extracorporeal detoxification, conditions for postoperative rehabilitation.

The clinical base of the study is the Leningrad Regional Clinical Hospital (a large multidisciplinary hospital of level III, with a capacity of ~1300 beds). According to regional routing, the hospital's gynecology department is an "external observation" department where patients with postpartum infection are hospitalized. 16 women with obstetric peritonitis due to uterine suture failure underwent organ-preserving surgery with metroplasty and secondary uterine suturing. Study period, January 2023 - July 2026.

Results

790 ml – average blood loss, 100% - perioperative antibiotic prophylaxis was performed, 100% - endomyometritis preceded peritonitis, 18.8% - combination with wound infection of the anterior abdominal wall, the debut of symptoms was noted at the end of the first week after childbirth (2-3 days after discharge from the hospital), the diagnosis of "peritonitis" was established on the 4th-5th day after the manifestation of endomyometritis.

93.8% - CS performed on an emergency basis, 100% - single-row continuous suture on the uterus, 43.8% - CS performed against the background of a long waterless interval, 25% - complications occurred during CS (difficulty in extracting the fetus, additional hemostasis, etc.), there were no patients after repeated CS.

Conclusion:

Late diagnosis of postpartum endometritis and irrational treatment can lead to further spread of the infection and the development of extremely severe complications, such as pelvic abscesses, pelvic vein thrombophlebitis, peritonitis, and even sepsis.

The use of organ-preserving surgeries in the complex treatment of obstetric peritonitis in case of failure of the uterine sutures is an alternative to the traditional obstetric tactics based on uterine extirpation (removal of the primary focus of infection).

The presented treatment algorithm was used in a multidisciplinary, well-equipped hospital.

24-hour supervision by a multidisciplinary team (obstetricians-gynecologists, surgeons, anesthesiologists-resuscitators).

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