

## 201. THE ROLE OF THE INFLAMMATION IN PRETERM BIRTH

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**Introduction.** Preterm birth is the leading cause of neonatal morbidity and mortality. Although the underlying causes of pregnancy-associated complication are numerous, it is well established that infection and inflammation represent a highly significant risk factor in preterm birth. However, despite the clinical and public health significance, infectious agents, molecular trigger(s), and immune pathways underlying the pathogenesis of preterm birth remain underdefined and represent a major gap in knowledge.

**Aim of the study.** To carry out a systematic analysis of the data available in the current literature on the impact of inflammation on preterm birth

**Materials and methods.** Three electronic databases (PubMed, EMBASE and Web of Science) were searched for studies in any language reporting the use of multiplex assays for inflammation associated with PTB published from January 2015 to March 2020.

**Results.** Inflammation and complex immunologic abnormalities, occurring in the absence of well-defined infectious triggers, have similarly been correlated with PTB. In addition to chronic inflammation, breakdown of the maternal/fetal tolerance, similar to an allograft rejection, can lead to adverse pregnancy outcome and PTB-evidence observed in chronic chorioamnionitis. Studies support the association between elevated levels of circulating proinflammatory cytokines and PTB, specifically, have implicated IL-1, TNF, and IL-6 as major players in the onset of PTB. Recently, IL-6 was identified as a critical marker of i.a. inflammation and a predictor of PTB; increased amniotic fluid IL-6 levels from the second trimester were associated with the timing and initiation of PTB. More than that infusion of IL-1 or TNF into the amniotic fluid leads to marked increases in i.a. proinflammatory cytokines levels or chorioamnionitis and as results ii lead to PTB.

**Conclusions.** Inflammation are major risk factors for PTB. However, the molecular triggers and mechanisms underlying the activation of immune pathways associated with induction of PTB remain poorly understood. Of note, adverse pregnancy outcomes have been well correlated with bacterial infections, including chorioamnionitis. However, the sequelae of asymptomatic infections remain poorly understood and warrant further investigations. However, the mechanisms underlying such processes remain underdefined. Additional medical screening of pregnant women for signs of infections and infection-associated immune mediators thus may lead to prevent PTB.

**Key words:** Inflammation, preterm birth, cytokines.

## 202. POST-CAESAREAN SEPTIC COMPLICATIONS

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**Introduction.** Obstetrics and gynecology are facing various problems, one of them being septic-purulent disorders in the post-operative period, which increase the maternal mortality rate. WHO experts report that the rate of maternal mortality worldwide is inadmissibly high. Every day, due to complications caused by pregnancy and childbirth, around 800 women die in the world. Due to effective antimicrobial preparations, maternal deaths due to infection have become less frequent. The mortality rate related to the infection is almost 25 times in the case of caesarean section versus vaginal birth. Maternal mortality and morbidity after caesarean section is almost five times that of vaginal births, especially the risks of hemorrhage, sepsis, thromboembolism and embolism with amniotic fluid. In a subsequent pregnancy, caesarean section increases the risk of anterior placenta and adherent placenta, which may further lead to an increased risk of hemorrhage and peripartum hysterectomy, technical difficulties due to adhesions increase the risk of injury to the bladder and intestine. A large number of factors modify the risk of infection, the most important being prophylactic antibiotics. That is why the problem of septic-purulent complications is current and requires continuous study.

**Aim of the study.** Analysis and highlighting of the factors associated with the high rate of post-caesarean complications compared to vaginal births.

**Materials and methods.** To achieve the goal, a retrospective study was conducted, we studied the medical records of clinical observation of the patients hospitalized with septic-purulent complications in the septic gynecology section a IMSP SCM1 in 2016-2018. The study included 200 patients with puerperal septic complications, which according to the birth method are divided into two groups: Lot I -116 cases, patients with septic complications after birth per vias naturalis. Lot II- 84 cases patients with septic complication after caesarean section.

**Results.** The study was carried out on a batch of 200 patients, selecting data from the archive, during the years 2016-2018, with extremes of 18 and 44 years respectively, the average age being 31 years. Age distribution: the patients aged 18-20 years were 25 patients (12.5%), 21-30 years -108 patients (54%), 31-40 years -60 patients (30%), > 41 years -7 patients (3.5%). The vast majority of patients studied were primiparous, which constituted 120 (60%): group I- 55 (27.5%) cases and in group II - 65 (32.5%). In 48 (37.49%) cases. The multiparous patients were: group I in 43 (21.5%) cases and group II 37 (18.5%). We mention that the clinical picture of puerperal septic complications, both after birth per vias naturalis and after caesarean section, results with the same symptoms: fever over 38, once with chills, accelerated pulse, altered state of intoxication, pain and lower abdomen region, pathological eliminations - the slime becomes abundant, gray, then purulent, with a fetid odor in depending on the pathogen. The estimation of the results of the laboratory examination found pathological deviations in the hemolothogram, vaginal smear, smear bacteriology, ultrasonographic examination. Studying somatic anamnesia, we determined that extragenital pathologies were present in 36 (18%) patients in group I and in 13 (6.5%) patients in group II. In the structure of the supported extragenital pathology, the first place belongs to the chronic pyelonephritis present in 19 (9.5%) patients and the anemia found in 17 (8.5%) patients, the second place - cholecysto-pancreatitis, appreciated in 6 (3%), cases, obesity in 5 (2.5%) patients, autoimmune thyroiditis 2 (1%) patients, hemorrhoid disease 1 patient, pregnancy-induced HTA 4(4%) patients. According to the results obtained, the septic-purulent complications of puerperium determined in the study were Lot I- endometritis - 116 (58%), metroendometrita -8 (4%) patients, dehiscence of the suture in the perineal suppuration and -27 (23.2%). Lot number II- Endometritis 56 (28%) patients, methoendometritis 20 (10%) cases, paravezical hematoma- 7 (3.5%) patients, abscess with intra-abdominal fistula- 4 (2%) patients, suppuration and

dehiscence of the wound in the uterus -12 (14.2%) . The average length of hospitalization for patients in Group I-13.36 days, patients in Group II-7.1 days. In the etiology of puerperal complications, bacterial infection plays a major role, the microbial agents determined in the vagina were in about 50-60% cases presented by E. Coli, Enteroco- 30-35%, Mixed flora 10-15%.

**Conclusions.** The predisposing are: complicated obstetric anamnesis, inflammatory extragenital pathology, birth complications and the presence of hematoma after birth . Early diagnosis and complex treatment reduce the generalization of the septic process that requires enlarged surgery, amputation of the uterus with / without appendages, which severely affects the woman's subsequent reproductive function.

**Key words:** maternal mortality, post-cesarean complications.

### **203. PARTICULARITIES OF THE EVOLUTION OF PREGNANCY AND BIRTH IN PRIMIPAROUS WOMEN WITH EXTREME AGES.**

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**Introduction.** Pregnancy in women of extreme ages has become a global problem. The notion of extreme age unites in itself, two great periods in a woman's life, adolescence and old age. According to the World Health Organization, a teenage pregnancy is defined as a pregnancy that occurs in girls aged between 10 and 19 years old. Each year, an estimated 21 million girls aged 15-19 years in developing countries become pregnant and about 12 million of them give birth, and 777,000 births occur to adolescent girls younger than 15 years. Over the last 30 years, although the birth rate has been decreasing considerably, the age at which women become pregnant has gradually increased, the fertility rate in European countries being 51.0 births per 1,000 women, Italy being in first place. In today's modern society, many women postpone pregnancy to an older age for various reasons, such as late marriage, longer life expectancy, the use of modern methods of contraception, and modern infertility treatment. Both teenage pregnancy and pregnancy in old age establish associations with a number of unfavorable outcomes and complications, such as anemia, poor nutritional status, preeclampsia, labor and premature birth, sexually transmitted infections, urinary tract infections, higher rate of assisted birth, as well as placental dysfunction, perinatal mortality, hypertensive disease, gestational diabetes, placenta praevia and abruptio placentae.

**Aim of the study.** Research the particularities of the evolution of pregnancy and birth in primiparous women up to 19 years of age and after 35 years.

**Materials and methods.** The study was conducted during 2018 and 2019, on a sample of 130 medical records in the Clinical Municipal Hospital No.1 Chisinau, Republic of Moldova. The research study presented is a descriptive, retrospective one. The patients included in the study were divided into two groups: Group I - 62 patients aged  $\leq 19$  years; Group II - 68 patients  $\geq 35$  years of age.

**Results.** Following the research carried out, in pregnant women the most frequently determined extragenital pathologies were diseases of the CV system ( $11.76 \pm 0.42\%$ ) and of the CNS ( $10.29 \pm 0.21\%$ ), while in adolescents reported more frequently anemia ( $33.87 \pm 0.33\%$ ) and diseases of the urinary system ( $24.19 \pm 0.38\%$ ) ( $p < 0.001$ ). In the group I of pregnant women, the obstetrical and gynecological history was complicated by: irregular menstrual cycle