
The Role of Vaginal Infection during Childbirth during Intrauterine Discharge of Amniotic Fluid against the Background of Cervical Erosion

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Summary: The article presents modern views on the etiology and pathogenesis of premature and antenatal rupture of amniotic fluid. Erosion of the cervix is a pathological process characterized by the appearance of an ulcerative defect in the mucous membrane of the cervix. The pathological, genetic and microbiological aspects of this pathology are considered. Further solutions to the problems associated with premature and antenatal rupture of amniotic fluid are outlined. The causes of prenatal outflow of amniotic fluid, despite numerous studies, are not completely established, although the leading factor in this complication is considered to be infection.

Keywords: erosion, full-term pregnancy, induction of labor, prenatal outflow of amniotic fluid.

Premature rupture of amniotic fluid is a serious problem in modern obstetrics. There is no single point of view regarding the cause of premature rupture of the membranes. In the literature, the role and nature of changes in the structure of the membranes during prenatal and premature rupture of amniotic fluid have been discussed so far. Despite the fact that many authors (Dvoryansky S.A., Araslanova S.N., 2002) consider infection the leading factor of premature rupture of the membranes at present, the course of labor and the condition of the newborn remain poorly understood.

There is an assumption that the clinical variants of premature discharge of water, as well as the features of the histological structure of the membranes, can determine the differences in the degree of risk of infection of the mother and the child, against the background of vaginal infection. The study of the histological structure of the membranes showed that they are metabolically active tissue and consist of amniotic epithelium, basement membrane, connective tissue, chorion and decidua. Connective tissue is built from collagen types 1 and 3, which provide the strength of the membranes. The basement membrane is located under the epithelium in the form of a narrow eosinophilic acellular mass; the compact layer is represented by a homogeneous mass devoid of cells (indicating the strength of the amniotic membrane). The fibroblast layer is located in a dense network of collagen and reticular fibers and intercellular substance. The spongy layer of the amnion is connected through connective tissue fibers and intercellular substance with a smooth chorion. In a smooth chorion, four layers are distinguished: cellular; reticular, containing fibroblasts and a pseudo basal membrane formed by a layer of trophoblast. The rupture of the membranes before labor is called premature rupture of amniotic fluid (AMR). Childbirth complicated by premature rupture of amniotic fluid during full-term pregnancy is 15.1–19.6% and 5–35% with premature birth (up to 37 weeks of gestation) and have no tendency to decrease. Leading obstetricians-gynecologists note that this pathology contributes to the growth of

complications during childbirth and in the postpartum period from the mother, fetus and newborn. It should also be noted that POT has a tendency to re-develop in subsequent deliveries with a frequency of up to 20–32%. The factors leading to FTI remain debated to this day. Despite the constant attention of scientists to the problem of PIOT, the etiology of this obstetric pathology remains completely unexplored, there are no clear ideas about the possible mechanisms of rupture of the membranes. Ladfors L., Chernukha E. A, Savelyeva G. M., Arias F. consider that PIOT is a polyetiologic pathology.

Antenatal rupture of amniotic fluid (IOM) is a serious problem in modern obstetrics. Amniotic fluid, or amniotic fluid, being a biologically active environment surrounding the fetus throughout pregnancy, performs a variety of functions, ensuring the normal functioning of the mother-placenta-fetus system. According to the data, childbirth against the background of prenatal rupture of the membranes is often accompanied by abnormalities of labor, hypotonic and atonic bleeding, and high rates of trauma to the soft tissues of the birth canal.

The causes of prenatal rupture of amniotic fluid, despite numerous studies, have not been finally established, although infection is considered the leading factor of this complication. Daneshmand et al., (2012) came to the conclusion that morpho - functional, physiological and biochemical changes in the genital tract during pregnancy lead to the fact that the vaginal microflora becomes more homogeneous, with a pronounced dominance of lactobacilli, which reduces the likelihood of fetal contamination. pathogenic microorganisms during its passage through the birth canal. But childbirth leads to significant changes in the qualitative and quantitative composition of the vaginal microflora. The number of non-spore-forming gram-negative strict anaerobes (mainly bacteroids), *Escherichia* significantly increases, and the levels of lactobacilli and bifidobacteria decrease. Violations of the normal vaginal microflora contribute to the development of such an infectious complication as endometritis. One of the mechanisms for maintaining normal vaginal microflora is associated with the formation of lactobacilli during their metabolism of lactic acid and other organic acids that maintain a low pH of the vaginal environment. Acidification of various media during the growth of lactobacilli inhibits the proliferation of opportunistic microorganisms such as candida, peptostreptococci, bacteroids, gardnerella and other bacteria secreted from the vagina of women with dysbiotic disorders. Gram-negative obligate - anaerobic bacteria, some of their types, have pathogenic properties: they contain lipopolysaccharide in the cell wall, which is an inducer of IL-8, the main cytokine that triggers the inflammatory process. They are capable of producing succinic acid, which inhibits the migration of polymorphonuclear neutrophils and their phagocytic ability. Consequently, this increases the likelihood of infection of the fetus and mother.

Antepartum rupture of amniotic fluid and a tightening of the anhydrous gap often leads to complications of the labor act (rapid and rapid labor, weakness and discoordination of the contractile activity of the uterus), which aggravates the condition of the fetus and in some cases requires prompt delivery.

The incidence of prenatal rupture of membranes varies widely: from 5 to 19.8% of cases in full-term pregnancies. Childbirth in this case does not always end favorably for the fetus and mother. Childbirth and the postpartum period may have: the risk of developing purulent-septic complications in the mother, abnormalities in labor and intrauterine infection of the fetus. In addition, labor induction may be ineffective, which leads to an increase in the frequency of surgical interventions.

Purpose of the study: Study of the role of vaginal infection in prenatal rupture of amniotic fluid,

Management of childbirth with prenatal rupture of amniotic fluid, at the same time studying the role of infection in DOV, to reduce obstetric and perinatal complications and the

development of rational tactics of labor management, with prenatal rupture of amniotic fluid.

Materials and methods of examination: To solve the set tasks, a comprehensive examination was carried out of 80 pregnant women whose childbirth was complicated with DIOV at 37-40 weeks of gestation, who were admitted to the Bukhara Regional Perinatal Center for the period of 2021. With the help of anamnestic pathomorphological, clinical, laboratory and instrumental data, the course of pregnancy, childbirth, the postpartum period, the state of the fetus and the newborn was studied. The readiness of the birth canal was assessed according to the Bishop scale. According to the National Standard for the Management of Patients with DIOV, after 18 hours of anhydrous interval, antibacterial therapy was carried out in order to prevent purulent-septic complications in puerperas. The birth canal of women in labor DIOV was examined after 24 hours in the absence of labor in order to resolve the issue of the feasibility of induction of labor. The nature of labor was monitored on the basis of partograms. Conducted: observation of hemodynamic parameters, maintenance of the observation sheet, measurement of to-body every 4 hours, laboratory control of leukocytes 1 time per day, general urine analysis, analysis of vaginal discharge. Conducted ultrasound of the uterus and fetus, cervicometry, monitoring of the rhythm and heart rate of the fetus and the general condition of the woman in labor. Given the high sensitivity of vaginal and cervical bacteria to ampicillin, this antibacterial drug was used according to the protocol. The state of the fetus was assessed according to the data of ultrasound and cardio to cography (CTG), and the state of the newborn at birth was assessed by the Apgar scale. Fetal monitoring during labor was performed using the Corometrics 170 apparatus.

Results and discussion: The average age of the observed women was 26.5 years. In all women, pregnancy proceeded against the background of extragenital diseases, and in most cases a combination of several of them. Mild and moderate anemia (72.2%), thyroid disease (33.3%) and varicose veins (25%) prevailed. Every third woman (32%) suffered infectious diseases during this pregnancy, mainly in the form of ARI, exacerbation of chronic sinusitis, cystitis, pyelonephritis. 16.7% of pregnant women had ARI episodes during pregnancy many times. Among the transferred gynecological diseases, colpitis of various etiology was most often diagnosed, which amounted to 43%. 72.2% of women in anamnesis pointed to previous inflammatory diseases of the genital tract. Basically, this manifested itself in the form of yeast, Trichomonas and banal colpitis, endometritis and adnexitis. 19.4% of women were treated for cervicitis and cervical erosions. According to previous analyzes of vaginal smears, 43% of women had grade 3 and 4 vaginal smears.

All women with prenatal rupture of amniotic fluid underwent a vaginal examination to assess the maturity of the cervix on the Bishop scale. The assessment was carried out according to 5 criteria. It was found that 61.1% of the examined pregnant women parameters of dilatation, length, consistency, position of the cervix and the state of the presenting part of the fetus had points up to 5, which was assessed as "immature cervix". And in 38.9% of women, the birth canal was assessed as "mature cervix".

Accordingly, the tactics of further management were chosen according to the OPC protocol. In pregnant women with "immature" cervix, induction of labor with Glandin E 2, 3 mg, 1 tablet intravaginally, was proposed after the informed consent of the pregnant woman and relatives. Conducted a conversation about possible complications of childbirth. During induction, fetal heart rate and uterine activity were monitored. The birth canal was reevaluated after 8 hours to clarify the need for continuation of induction. In pregnant women with a "mature" cervix, labor was carried out with expectant tactics until regular labor was played out, or a consultation of doctors resolved the issue of oxytocin delivery. 58.3% of pregnant women delivered through the vaginal birth canal. Newborns born to mothers with DIOV were assessed on the Apgar scale by an average of 6 points.

Conclusions: studies have shown that in the majority of women in labor with prenatal rupture of membranes, cervical readiness was assessed up to 5 points, which meant "unpreparedness" of the birth canal for childbirth. Of this number, 58.3% of women in labor underwent labor induction after the informed consent of the woman in labor and her relatives. 22.2% of women in labor had relative or absolute contraindications to labor induction and birth stimulation. The remaining 19.4% of women in labor refused to undergo labor induction, for which cesarean section was chosen as a further tactic of delivery. The study of the postpartum period showed that 26.4% of women had complications such as lochiometer and hematometer, manifested in the form of subinvolution of the uterus, substantiated by clinical, pathomorphological data and ultrasound studies. Secondary healing of soft birth canal wounds was observed in 18.1% of women. In 2.8% of women, the postpartum period showed signs of exacerbation of chronic inflammatory diseases of the genital tract.

Conclusion:

1. A long anhydrous period is a factor in increasing infection, which leads to an increase in obstetric and perinatal pathology.
2. A long dry period increases the morbidity of newborns and postpartum women in the postpartum period.
3. A long anhydrous period increases the contamination of the birth canal of the general and conditionally pathogenic flora and leads to an increase in the imbalance of the vaginal ecosystem.
4. These data dictate the need for the use of antibacterial drugs in women in labor with DIOV. The appointment of antibiotic therapy after 18 hours of anhydrous interval prevents the development of purulent-inflammatory processes in the body of the woman in labor and the fetus, causes colonization resistance and is not a contraindication to operative delivery by caesarean section.

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