

Features of the Course of Pregnancy and Childbirth in Woman with a History of Non-Developing Pregnancy in the Samarkand Region

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Abstract

The purpose of the investigation was to study the specific features of the course of pregnancy and labor in women with a history of non-developing pregnancy and to improve pregravid preparation to reduce perinatal losses. Ninety-two patients with a history of non-developing pregnancy, including 53 patients who had pregravid preparation before the occurrence of a subsequent pregnancy and 39 who did not, were examined. The results of the investigation suggest that comprehensive pregravid preparation comprising metabolic and vasoactive agents and hormonal support is effective in providing a more favorable course of pregnancy and labor and in improving perinatal outcomes.

Key words: Non-developing pregnancy(NP); Preconception preparation; Utrogestan; Perinatal outcomes.

Introduction

The unfavorable demographic situation in the Samarkand region and a large percentage of losses of desired pregnancies determine not only the medical but also the social significance of the problem of miscarriage. In the structure of early reproductive losses, one of the main places is occupied by non-developing pregnancy (NP), the frequency of which remains stably high [1-4]. At the same

time, despite numerous studies on this issue, the proportion of unexplained causes of NP still remains high and, according to different authors, ranges from 25 to 57% [5-8].

Most researchers believe that a persistent viral bacterial infection occupies the leading place in the etiology of NP, and chronic endometritis forms the basis of the pathogenesis of this pathology [6,7,10-12]. So, according to VE Radzinsky [7], genital

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infection was detected in 96% of women with NP. Changes in chronic endometritis interfere with normal implantation and placentation and form a pathological response to pregnancy, which leads to early reproductive losses. In conditions of chronic endometritis, fertilization, embryogenesis, and the development of pregnancy occur in almost every fourth woman [8,9]. The data obtained dictate the need for preconception preparation for all women planning a pregnancy, and, of course, for patients with a history of NP.

Aim

The aim of the study was to study the characteristics of the course of pregnancy and childbirth in women with a history of NP and to improve preconception preparation to reduce perinatal losses.

Material and methods

To achieve this goal, 92 patients with a history of NP were examined, which were divided into two groups: 53 patients, in accordance with the recommendations of doctors, received preconception preparation before the onset of the next pregnancy (main group); 39 women went to the antenatal clinic in the early stages of pregnancy, and they did not undergo preconception preparation. The latter formed the comparison group.

The first stage of preconception preparation was the study of the reproductive health of patients with a history of NP in order to identify the cause of the incident. When a sexually transmitted infection was detected, antibiotic therapy was carried out with the addition of antiviral drugs. NP is often caused not only by the direct damaging

effect of the infectious agent, but also by a complex of immune and hormonal disorders caused by the inflammatory process. The response to these disorders is morphological changes in the endometrium, weak decidualization of the endometrial stroma, leading to incomplete invasion of the cytotrophoblast into the adjacent endometrium and a decrease in the number of uteroplacental arteries. The immediate cause of the death of the embryo is the decrease in uteroplacental circulation and detachment of the trophoblast. That is why it was considered expedient to include metabolic drugs and progestogens in the complex of preconception preparation [11,13]. As drugs that have a metabolic effect, Galavit or Genferon were used.

At the stage of preconception preparation, each patient underwent Doppler ultrasound to assess the characteristics of the endometrium and its blood supply. With a decrease in the level of blood circulation and the normal state of the endometrium during the “implantation window”, agents that improve blood flow (actovegin, antiplatelet agents) and progesterone in the second phase of the menstrual cycle were prescribed.

Dufaston was used, which is identical in chemical structure to endogenous progesterone and has an identical effect on changes in the endometrium and the body as a whole. It promotes the growth of uterine vessels, carries out secretory transformation of the endometrium, reduces the thickness of the stroma of the submucosal layer, reduces the tone of the muscles of the uterus by increasing the transcription rate of β -adrenergic receptors, and neutralizes the

action of oxytocin and prostaglandins. Oral and intravaginal routes of administration are possible; topical administration of the drug was preferred, as it provides a targeted delivery of progesterone from the vagina to the uterus, avoiding the primary passage through the liver. With the intravaginal route of administration, the active substance is well absorbed and metabolized to a lesser extent, which contributes to the creation of a more favorable ratio of the active substance and its metabolites. Progesterone was prescribed at a dose of 20-40mg per day for 3 menstrual cycles.

With a combination of circulatory disorders and low endometrial thickness (less than 9-10mm according to ultrasound), estrogens were prescribed in the first phase of the menstrual cycle with a further transition to gestagens.

After the elimination of the infectious agent, complex metabolic and hormonal therapy for 3 menstrual cycles, in order to assess its effectiveness, a second examination was carried out, including ultrasound with Doppler.

Results and discussion

The age at which NP was diagnosed, according to medical records, ranged from 18 to 39 years, but the largest proportion of NP was noted at the age of 29.63 ± 1.8 years, reflecting the extremely unfavorable reproductive potential in young women. NP was diagnosed within the period of 4 to 16 weeks, while in 41.6% of cases it was detected in the period from 7-8 weeks of pregnancy, in 31.6% from 5-6 weeks, in 10% from 9-10 weeks, in 8.33% from 11-12 weeks, in 5% from 14-16

weeks, in 3.33% from 4-5 weeks. Attention is drawn to the increase in the proportion of combined concomitant somatic pathology in women of reproductive age, which coincides with the data of other authors [13,14]. At the same time, from 1 to 5 extragenital diseases were registered in the examined patients. Only every fifth woman (21.6%) denied any history of any gynecological pathology. In the structure of gynecological diseases, inflammatory processes prevailed (in 51.5% complicated ectopia of the cervix, in 31.6% inflammatory diseases of the pelvic organs). In 13.3% of patients, cystic ovarian formations were detected, in 11.5% menstrual irregularities, in 3.3% uterine fibroids.

A detailed study of the obstetric and gynecological history in puerperas with a history of NP showed that artificial termination of pregnancy occurred in 50% of the examined women ($p < 0.001$), including 2 or more medical abortions in 43.3% of cases ($p < 0.05$), spontaneous abortion in 8.33%. More than 2 cases of NP in history were 11.6% of patients.

The time interval from NP to the onset of the next pregnancy ranged from 1 year to 14 years, averaging 3.7 ± 1.1 years.

An analysis of the course of this pregnancy showed that only 11.6% of women in the comparison group had a gestational period without complications. In patients receiving pregravid therapy, this figure was 21.3%. The most common complication of pregnancy in patients of both groups was the threat of abortion. In the first trimester, every second (45%) pregnant woman in the comparison group and 39% of patients in the main group were hospitalized because of the threat of

abortion, while 8.1% of women in the comparison group and 6.6% of the main group were hospitalized 2 times and more. In the second trimester, 28.3% of pregnant women in the comparison group and 25.2% of the main group were hospitalized with the threat of spontaneous abortion. The course of gestation in the third trimester in every third (30%) case was complicated by preeclampsia of moderate severity, there were no significant differences in this complication in the compared groups. In 16.6% of pregnant women of the comparison group and 16.1% of the main group, intrauterine fetal hypoxia was stated. Placental insufficiency was diagnosed in 6.6% and 6.4% of cases, respectively. During pregnancy, urogenital infection was detected in 33.3% of cases, 11.5% of women in the comparison group were carriers of antibodies to herpes simplex virus and cytomegalovirus, which confirms the need for pregravid preparation; 48.3% of women in the comparison group and 41.3% of the main group suffered an acute respiratory viral infection during pregnancy, with a rise in body temperature to 38 °C in 16.6%.

In patients of the studied groups, only 31.6% of deliveries in the comparison group and 28.2% in the main one ended without complications. 21.6 and 21.3% of patients, respectively, were delivered by caesarean section, which is slightly higher than the average population. In 3.3% of cases, premature births occurred in patients of the comparison group, whereas in the main group-premature births occurred in 4.1%. Early and prenatal rupture of amniotic fluid was noted in every third (35%) of the examined, no significant differences were found in the groups. Weak labor activity complicated 23.3% of births in parturient

women of the comparison group and 22.8% in the main group. Intrauterine fetal hypoxia during childbirth was diagnosed in 15% of cases in mothers of the comparison group and in 13.8% in the main group. Against the background of chorioamnionitis, childbirth occurred in 5% of cases in the comparison group; this pathology did not occur in the main group. In 8.3% of the puerperas of the comparison group, a dense attachment of the placenta was diagnosed, for which manual separation and removal of the placenta were performed (in the main group-only in 2.5%).

Attention was drawn to the high percentage of perinatal pathology in the surveyed comparison group. Apgar score of newborns was 7.3 ± 0.3 points on average, in the main group 8.1 ± 0.6 points. In 80% of children from the comparison group and in 62% of the main group, there was a high risk of developing hypoxic CNS lesions and intrauterine infection. Every third (28.3%) newborn from the comparison group was diagnosed with ischemic damage to the CNS of I-II degree, 3.5%-antenatal infection of the CNS, 3.3% convulsive syndrome, 40%-severe neonatal jaundice newborns. In children of the main group, these complications were significantly lower. Morphofunctional immaturity was revealed in 15% of newborn mothers of the comparison group and only in 4% of children of the main group. Acute intranatal fetal asphyxia occurred in 5% of women in labor in the comparison group and in 3% of the main group. Every tenth (11.5%) newborn was born hypotrophic in the comparison group (in the main group-6.4% of newborns). In 16.6% of patients in the comparison group, the postpartum period proceeded with complications: in 8.3% of cases, it was complicated by the formation of

lochiometers, in 5%-by hypotonic bleeding, and in 3.3% of cases fever was recorded. In mothers of the main group, the course of the postpartum period was complicated in 13.2% of cases.

The results of the study indicate the need for preconception preparation in all patients with a history of NP. This reduces the incidence of complications of pregnancy and childbirth and, most importantly, significantly improves perinatal outcomes.

Conclusion

1. The most common complication of the course of pregnancy in patients with a history of non-developing pregnancy is the threat of its termination. Conducting preconception preparation can reduce the number of cases of threatened miscarriage by 6%.

2. Comprehensive pregravid preparation provides a significant improvement in perinatal outcomes, which consists in the birth of children with a higher Apgar score, a decrease in the number of newborns with malnutrition and cases of hypoxic CNS damage.
3. Pregravid preparation should be selected individually, taking into account the data of the patient's examination for the presence/absence of an active infection, the results of ultrasound (endometrial thickness during the "implantation window"), dopplerometry (features of blood flow).
4. Pregravid preparation in patients with a history of non-developing pregnancy, including antibiotic therapy, metabolic and vasoactive drugs, hormonal support, ensures a favorable course of pregnancy and a live and healthy child.

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