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UTERINE SCAR AND REPEAT PREGNANCY

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ABOUT ARTICLE

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Abstract: According to the Ministry of Health for 2022, we registered 932.2 thousand births, which is the highest figure since independence. The total fertility rate (number of births per 1,000 inhabitants) was 26.2 – in 2022, which falls into the category of countries with a "moderately high" fertility rate. The purpose of the study was to assess the condition of the postoperative scar in women who underwent cesarean section. The study is based on a clinical and laboratory examination of 103 women of reproductive age with a history of one uterine scar, who was under observation in the department of Obstetrics and Gynecology of the multidisciplinary clinic of Samarkand State Medical University for the period from 2020 to 2022. Thus, it can be noted that there is an improvement in the concentration of type XXVI collagen in postpartum women who have undergone a full course of rehabilitation measures after childbirth, which, in turn, indicates a better restoration of damage to the genital organs, including the condition of the scar.

INTRODUCTION

According to the Ministry of Health for 2022, we registered 932.2 thousand births, which is the highest figure since independence. The total fertility rate (number of births per 1,000 inhabitants) was 26.2 – in 2022, which falls into the category of countries with a "moderately high" fertility rate. The frequency of surgical births in Uzbekistan is about 23% of all births. According to statistics from the Republic of Uzbekistan for 2017-2022, from 5100 to 5897 women per year give birth surgically, and the number of women with a uterine scar increased from 568 to 618, with the predominant number of women with

one scar. The majority of women who completed childbirth through CS corresponded to district medical associations. Among them, the number of first-feeders ranged from 10.5% to 17.7%. During pregnancy, 77.2% of women had various somatic diseases, such as: obesity, myopia, chronic pyelonephritis, chronic gastritis, anemia, hypertensive conditions, neurocirculatory dystonia, hydronephrosis, varicose veins. In 92.3% of those who underwent a CS, repeated births ended with a repeat cesarean section with removal of the postoperative scar. And only 7% of women with one uterine scar were delivered through the vaginal canal during repeated births.

CS often has a certain impact on the subsequent reproductive activity of women: infertility, miscarriage, spontaneous abortion, and menstrual irregularities. In addition, a CS cannot always ensure the birth of a healthy child. Thus, in late pregnancy, infectious diseases of the mother, severe hypoxia, and especially in cases of very early premature birth, the health of the unborn child depends on many factors. Although CS for preterm birth reduces perinatal mortality, it does not affect the incidence of perinatal morbidity, especially in children born with low and very low birth weight. The health of children born before the 32nd week of pregnancy is often associated with underlying maternal diseases (extragenital, infectious diseases, etc.), as well as pregnancy complications (severe gestosis, premature separation of a normally located placenta).

The scar on the uterus, in turn, determines the characteristics of the subsequent period of pregnancy, which is often expressed in the risk of miscarriage, placental insufficiency, and malposition of the fetus. In addition, in women with uterine scars, there was a delay in intrauterine growth and fetal development due to placental insufficiency (O. V. Gorbunova, 2004; E. V. Bolvacheva, 2007). In this regard, the issues of pregnancy and childbirth in women with uterine scars are very relevant.

According to the literature, from 13.0 to 50.0% of women can be individually recommended to give birth through the birth canal after cesarean section (L.S. Logutova, 2006; Oden M., 2006). The frequency of favorable outcomes of vaginal birth after CS is much higher, although the data is variable and ranges from 80.0 to 90.0% of women with a uterine scar (L. S. Logutova, 2006; M. Oden, 2009). At the same time, the issue of natural delivery of women with a uterine scar has not yet been fully studied. Risk factors and management tactics for women with uterine scars are not well developed.

The purpose of the study was to assess the condition of the postoperative scar in women who underwent cesarean section.

MATERIALS AND METHODS

The study is based on a clinical and laboratory examination of 103 women of reproductive age with a history of one uterine scar, who was under observation in the department of Obstetrics and Gynecology of the multidisciplinary clinic of Samarkand State Medical University for the period from 2020 to 2022. During clinical and laboratory examination, pregnant women were divided into 2 groups: Group I - with a stable scar (n=66), and Group II with an incompetent scar (n=37).

General clinical, obstetric-gynecological, enzyme immunoassays (amounts of type XXVI collagen), instrumental research methods (ultrasound, Doppler), morphological and statistical methods were used.

Variation-statistical processing of the study results was carried out using the Statistica 6.0 program, determining the main indicators of variation: mean value (M), mean errors (m), and standard deviation (p). The reliability of the results obtained was determined using the Student's test. The difference between the two means is considered significant if the p-parameter is less than 0.05. The confidence level was at least 95%. The correlation between the indicators was calculated using the Excel 2010 table, and the correlation coefficient was calculated according to Spearman.

Results. In the course of scientific work, the number of births was determined, as well as cesarean sections in the obstetric department of the multidisciplinary clinic of SamSMU for 2020-2022. (Fig. 1).

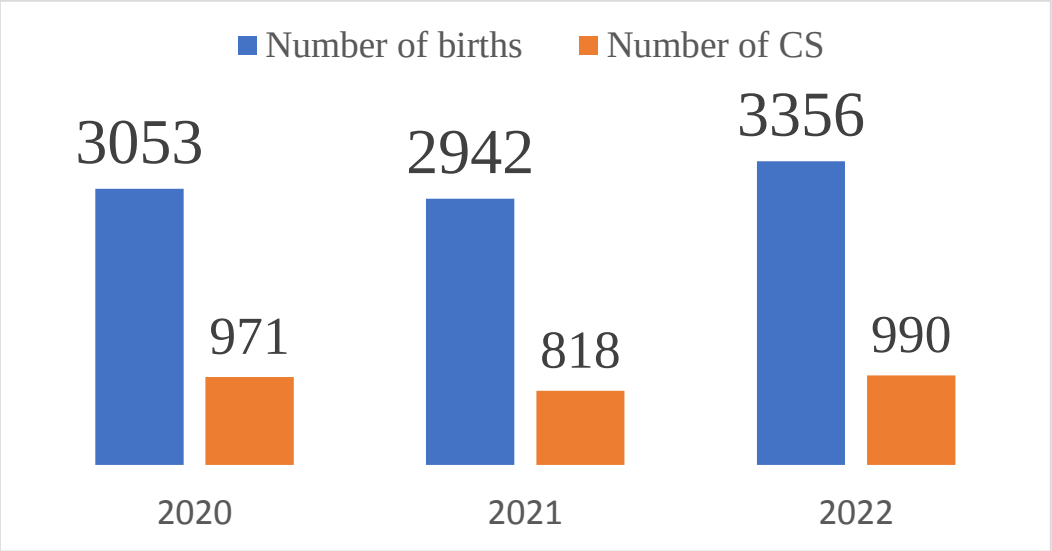

Figure 1. Number of births and CS in 2020-2022. at the multidisciplinary clinic of SamSMU

As can be seen from Figure 1, in 2020 there were 3053 births, and the number of cesarean sections was 971, which amounted to 31.8%. In 2021, both the total number of births and the number of CS decreased, and the CS birth rate dropped to 27.8%. In 2022, 3356 births were registered, and the CS

rate was 29.5%. This may be due to an increase in the number of births and a proportional increase in the number of CS, but compared to 2020, there is a decrease in the frequency of CS by 2.3%.

Our observations confirm the literature data that among postpartum complications, purulent-inflammatory ones take first place; when compared, complications after surgical delivery predominate, which once again emphasizes the importance of natural childbirth.

When assessing long-term complications of cesarean section, the main clinical signs were analyzed: pain, menstrual irregularities, dyspareunia, sexual dysfunction, and changes in the microbiocenosis of the reproductive tract.

When analyzing the level of somatic pathology in both groups, we did not find significant differences in all forms and types of pathologies. Noteworthy is the significant incidence of diseases of the urinary system (17.64% in the main group and 17.14% in the comparison group) and gastrointestinal tract (16.17% and 20%, respectively). In some cases, chronic diseases of the upper respiratory tract and varicose veins of the legs were noted (7.35% and 8.57%, respectively).

At the same time, the presence of somatic pathology, including inflammatory origin, significantly affects the clinical picture of pregnancy, childbirth and the postpartum period.

In the main group, 20.5% of pregnant women showed a decrease in blood hemoglobin levels from normal (91.1±1.24 g/l on average for the group). A low level of leukocytes was detected in 8.82% of pregnant women in the main group (group average 5.89±1.31x103/mm3). This phenomenon is associated with their poor nutrition and complications during pregnancy in the form of vomiting of pregnancy, observed at the beginning of pregnancy, since the body did not receive enough nutrients, trace elements and vitamins.

The level of collagen type XXVI was determined by indirect enzyme immunoassay on polystyrene plates (ELISA test) according to the classical method. The choice of ELISA as the main method used in our work is due to its convenience and relative ease of implementation, high specificity and sensitivity.

Among pregnant women, based on the results of determining genital collagen type XXVI by enzyme immunoassay, a decrease in the expression of type XXVI collagen in the main group was revealed, which leads to an increase in the activity of tissue destruction processes.

Comparing the mean values, we found significant ($p = 0.01$) differences between the main group and the comparison group after rehabilitation measures. After the first CS, the average levels of collagen

type XXVI did not differ in both groups during the second pregnancy, but after delivery its indicator showed significant changes in the two groups. Thus, in the comparison group, the average concentration of type XXVI collagen was 322.28±34.5 ng/ml; upon re-examination 3 months after birth, a significant decrease in the average concentration of type XXVI collagen was noted, which amounted to 164.12±6.25 ng/ml .

The average concentration of type XXVI collagen in the main group during pregnancy was 328.22±17.5 ng/ml, and 3 months after birth - 363.1±48.4 ng/ml. This indicates the effectiveness of rehabilitation procedures. The data obtained show that collagen type XXVI can be taken as a predictor of the choice of method of delivery.

All 103 pregnant women had an ultrasound scan at 36–38 weeks, when the condition of the scar can be assessed most reliably. It has been established that the tissue in the scar zone of the uterus has less elasticity than in other parts of the uterus.

The thickness of the scar is 3.0-3.5 mm, the absence of a clear deformation in the area of the uterine scar, its uniformity, the location of the blood flow and the absence of the placenta in the area of the lower segment of the uterus and the scar were considered the main sonographic criteria for choosing a method of delivery and the main criteria for assessing the area of the scar after surgery KS.

According to ultrasound data, in 29 (42.64%) women in the main study group and 35 (100.0%) women in the comparison group, ultrasound revealed the presence of various elements located between full-blooded capillaries and small-caliber capillaries, indicating the “consistency” of the uterine scar.

In pregnant women with a uterine scar after CS, the main criteria for scar failure on ultrasound were deformation of the uterine cavity in the area of the sutures, the presence of local folds and visualization of the “niche” symptom in the area of the postoperative scar.

37 (54.41%) pregnant women in the main study group had an echo picture of the uterine scar, characterized by the presence of atrophy and the formation of a thin fibrous cover, a defect in the uterine wall in the area of the scar, and inadequate blood circulation along the scar. Uterine hypertonicity in both study groups was 55.88% and 57.14%, respectively.

CONCLUSION

Thus, it can be noted that there is an improvement in the concentration of type XXVI collagen in postpartum women who have undergone a full course of rehabilitation measures after childbirth,

which, in turn, indicates a better restoration of damage to the genital organs, including the condition of the scar.

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