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**CRITERIA FOR ASSESSMENT OF POSTOPERATIVE SCAR CONSISTENCY IN WOMEN WHO  
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**ABOUT ARTICLE**

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**Key words:** Cesarean section, surgical scar, women, pregnancy, rehabilitation.**Received:** 16.05.2024**Accepted:** 21.05.2024**Published:** 26.05.2024**Abstract:** The number of cesarean sections around the world is increasing every year. This is influenced by the rapid development of modern medical science, improved surgical techniques, new suture materials and broad-spectrum antibiotics, pain relief, and the change in society's attitude to childbirth. According to the World Health Organization (WHO), cesarean section (CS) is the most widely used operative method of childbirth today. Determining the role of CS practice in the search for ways to reduce perinatal and maternal morbidity and mortality is essential. In some cases, this method of delivery is the only way to reduce maternal mortality: premature separation of the normally located placenta and / or the appearance of signs of its partial separation, severe hypertensive conditions, including a severe degree of preeclampsia and eclampsia, somatic complications that lead to complications in the mother's natural delivery pathologies.

Thus, the tactics of taking women with a scar on the uterus through natural childbirth, with adequate prenatal preparation, the development of criteria for assessing the adjustment of the surgical scar, the lack of special criteria for predicting the probability of natural childbirth in pregnant women who underwent cesarean section, the special urgency of finding a solution to these issues defines. Therefore, it is necessary to study the condition of women with uterine

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scars, to improve the tactics of pregnancy and childbirth management, as well as the methods of preventing and predicting complications.

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## INTRODUCTION

Currently, in our republic, the establishment of a healthcare system that ensures a radical increase in the quality, efficiency, and popularity of medical assistance to the population, including taking patients to reduce the frequency of CS, providing them with specialized medical services, and comprehensive measures aimed at reducing their complications are being increased and certain positive results are being achieved. In this regard, tasks such as "...expanding the use of quality medical services for mothers and children, providing them with specialized and high-tech medical assistance, and wider implementation of comprehensive measures to reduce infant and child mortality" are defined. Based on these tasks, it is now possible to prevent complications by determining the clinical course of each case based on clinical, laboratory, and functional analysis, determining the instructions for their treatment, and determining the optimal method, time, and volume of treatment.

Decree of the President of the Republic of Uzbekistan No. PD-60 of January 28, 2022 "On the development strategy of the new Uzbekistan for 2022-2026", No. PD-5590 of December 7, 2018 "On comprehensive measures to fundamentally improve the healthcare system of the Republic of Uzbekistan" decrees, Decision No. PD-5199 of July 29, 2021 "On measures to further improve the system of specialized medical care in the health sector" and other regulatory legal documents related to this activity, this dissertation research serves to a certain extent.

The aim of the study: to assess the state of the postoperative scar in women who underwent cesarean section and to improve the rehabilitation after childbirth.

Materials and methods. On the basis of the Department of Obstetrics and Gynecology No. 1 of the multidisciplinary clinic of the Samarkand State Medical University, work was carried out on the assessment of the correctness of the postoperative scar in women who underwent cesarean section, the results of childbirth, and the development of optimal tactics for rehabilitation in the postoperative period.

The scientific study is based on the analysis of the results of comprehensive examination and dynamic monitoring of 103 patients of reproductive age with 1 scar on the uterus after cesarean section. The age of the patients was from 18 to 40 years, and the average age was  $24.5 \pm 4.1$  years.

In order to achieve the goal of the study, important prognostic clinical and anamnestic, instrumental and morphological criteria were determined during the scientific work to assess the condition of the scar in the uterus.

In the course of scientific work, the number of births in the obstetrics department of the SamSMU multidisciplinary clinic in the period of 2020-2022 and the number of obstetric practices from them was determined.

The scientific work was carried out during 2020-2022 in the obstetrics and gynecology departments of the SamSMU multidisciplinary clinic on 103 patients of reproductive age with one scar on the uterus. During the clinical and laboratory examination, pregnant women were divided into 2 groups:

Group I (n=66) included 66 women with a clinically "soz" scar on the uterus, who were routinely admitted, and they were divided into 2 subgroups (IA and IB) according to the outcome of the delivery.

Group II (n=37) consisted of 37 pregnant women who were diagnosed with a "defective" scar during the examination at the 36-38th week of pregnancy, and a cesarean section was recommended to prevent complications. These pregnant women were also divided into 2 subgroups (IIA and IIB) according to the results of childbirth. In addition to general clinical research methods (general blood and urine analysis, vaginal smear analysis), special research methods were used in the work, including:

- Laboratory research methods (estimation of hemostasis state, immunoenzyme analysis of type XXVI collagen content, biochemical analysis of blood). Type XXVI collagen indicators were checked in the studied women before delivery and, depending on their indicators, women were recommended for natural delivery or repeated KK.

Laboratory analysis of homeostasis was carried out using the ROS analyzer developed for the integral assessment of the state of hemostasis.

Biochemical analysis of blood was carried out on Chemray 360 automatic analyzer of Raito (China).

The level of collagen type XXVI was determined by indirect enzyme-linked immunosorbent assay on polystyrene plates (IFA-test) according to the classical method. The choice of IFA as the main method used in our work is based on its convenient and relatively easy performance, high specificity and sensitivity.

Using standard enzyme kits for "human collagen type XXVI" immunoenzyme analysis (Quantikine, R&D Systems, USA), the concentration of collagen type XXVI was determined before and after rehabilitation measures after CK, expressed in ng/ml.

## RESULTS AND DISCUSSION

Due to the high level of chronic inflammatory processes in the genitals, we considered it appropriate to evaluate the main indicators of microbiocenosis of the genitals (Table 1). Significant differences between the study group and the comparison group were the amount of Lactobacillus spp (in group I -  $6.2 \pm 0.1$  CFU/ml; in group II -  $4.0 \pm 0.2$  CFU/ml;  $p < 0.05$ ); Bifidobacterium spp. (Group I -  $4.3 \pm 0.2$  CFU/ml; Group II -  $3.1 \pm 0.2$  CFU/ml;  $p < 0.05$ ); Enterococcus spp. (in group I -  $3.7 \pm 0.2$  CFU/ml; in group II -  $5.2 \pm 0.3$  CFU/ml;  $p < 0.05$ ); S. aureus (in group I -  $3.8 \pm 0.3$  CFU/ml; in group II -  $5.3 \pm 0.2$  CFU/ml;  $p < 0.05$ ) Candida spp. (in group I -  $3.1 \pm 0.2$  CFU/ml; in group II -  $4.4 \pm 0.3$  CFU/ml;  $p < 0.05$ ).

**Table 1**

**State of vagina microflora, CFU/ml**

Source	I group (n=66)	II group (n=37)
Lactobacillus spp.	$6,2 \pm 0,1$	$4,0 \pm 0,3^*$
Bifidobacterium spp.	$4,3 \pm 0,2$	$3,1 \pm 0,2^*$
E. coli (lac+)	-	$1,6 \pm 0,4$
E. coli (lac-)	$3,8 \pm 0,3$	$3,9 \pm 0,3$
E. coli (haem+)	-	$1,8 \pm 0,2$
Энтеробактериялар	$3,4 \pm 0,2$	$3,5 \pm 0,3$
Enterococcus spp.	$3,7 \pm 0,2$	$5,2 \pm 0,3^*$
S. aureus	$3,8 \pm 0,3$	$5,3 \pm 0,2^*$
S. epidermidis	$3,6 \pm 0,1$	$3,8 \pm 0,2$
S. saprophyticus	$3,5 \pm 0,2$	$3,7 \pm 0,2$
St. atsidofil	$3,6 \pm 0,3$	$3,5 \pm 0,3$

Corynebacterium spp.	3,8±0,3	3,7±0,3
Candida spp.	3,4±0,2	4,4±0,3*
Bacteroides spp.	-	2,0±0,2
Peptococcus spp.	-	2,0±0,2
Peptostreptococcus spp.	-	2,2±0,2

During the ultrasound examination of the instrumental examination methods, the ultrasound was first performed in the B-mode. In the next step, the elasticity of different parts of the uterus (front wall of the uterus, scar area, cervix) was evaluated in real time by calculating the elasticity index (elasticity ratio). The point of transition of the back wall of the uterus to the bottom of the uterus was taken as a standard.

In the first phase, we performed a comparative evaluation of the postoperative scar status in the women who underwent cesarean delivery included in this study sample. All 103 follow-up studies were conducted at 36-38 weeks of pregnancy, when the state of the scar can be most reliably assessed. It was found that the tissue in the scar zone of the uterus has less elasticity than other parts of the uterus, both in the early postoperative period and one year after childbirth. The decrease in elasticity was especially noticeable in the early period after cesarean section. Another feature is that the low elasticity of the scar is combined with the high elasticity of the nearby parts of the uterus (from above - the front wall of the uterus and the area of the cervix under the scar). The thickness of the scar is 3.0-3.5 mm, the absence of clear deformation in the area of the scar in the uterus, its uniformity, the location of the blood flow and the absence of the placenta in the area of the lower segment of the uterus were considered the main sonographic criteria for choosing the method of delivery and the main criteria for the adjustment of the area of the scar after the operation of CS.

It can be seen that these three simple, quick, and easy-to-use criteria can be used to assess the condition of the scar area and develop delivery tactics accordingly.

In conclusion, the following diagnostic algorithm for choosing a method of delivery for pregnant women with a scar on the uterus allows to selection of a risk group and excludes complications of the act of childbirth:

- General clinical and standard laboratory examination at 36 weeks
- Determination of the amount of type XXVI collagen in blood
- US inspection

According to the prognostic criteria for natural childbirth in pregnant women with a scar on the uterus: the thickness of the uterine wall in the area of the scar is more than 3.00 mm, but less than 7 mm; the level of type XXVI collagen in the venous blood plasma should not be less than 349.55 ng/ml, the cervix is fixed, the absence of somatic diseases that could be a contraindication for natural childbirth, the presence of complete recovery and rehabilitation of the scar after the previous CC operation, compliance with the recommended intergravid interval between births criteria such as attainment can be accepted.

## CONCLUSION

In the early postpartum period, the use of rehabilitation methods in women who gave birth by natural childbirth, despite the signs of CS practice and scar deficiency, showed an improvement in their general condition, rapid recovery of genital organs after childbirth. This condition was expressed by the restoration of the size of the uterus in the US, with the restoration of the scar area, and the improvement of the indicators of collagen type XXVI after 3 and 6 months. The optimal delivery tactics directly depend on the presence of somatic pathology, the time of referral of pregnant women, clinical signs of postoperative scar adjustment, US data, type XXVI collagen level, and rehabilitation procedures after cesarean section.

To improve the results of subsequent pregnancy and childbirth, rehabilitation procedures (magnetic therapy and ultrasound therapy) were used, as a result of which a rapid recovery of the general condition of women, a 44% increase in the amount of collagen type XXVI in the main group, and a 2-fold recovery of the postoperative area according to US data were noted.

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