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Research Article

MODERN CRITERIA FOR DIAGNOSTICS OF PATIENTS AFTER CESAREAN SECTION OPERATION

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ABSTRACT

The number of caesarean sections around the world is increasing every year. This is influenced by the rapid development of modern medical science, the improvement of surgical techniques, the emergence of 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), caesarean 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 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 scars, to improve the tactics of pregnancy and childbirth management, as well as the methods of preventing and predicting complications.

KEYWORDS

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Caesarean section, surgical scar, women, pregnancy, rehabilitation, diagnostics.

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 on the basis of 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: diagnosis of postoperative scar in women who have undergone cesarean section and improve 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±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

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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 CS.

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.

Table 1

The interval between CS and repeated pregnancy

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interval, years	I group (n=66)		II group (n=37)	
	abs	%	abs	%
1	35	53,03	16	43.24
2	23	34.84	13	35.13
3	8	12.12	8	21.62
Total	66	100,0	37	100,0

We also used the method of evaluating the state of the scar using ultrasound. Ultrasound examination of the myometrium was carried out at 36-38 weeks of pregnancy, since the condition of the scar can be reliably assessed during this period. The thickness of the scar is 3.0 mm, the absence of clear deformation in the area of the scar in the uterus, its uniformity, the proportion of blood flow, the localization of the scar and the absence of the placenta in the lower segment of the uterus were taken as the main sonographic criteria for choosing the method of delivery in pregnant women.

All laboratory examinations were carried out in the laboratory department of the SamSMU multidisciplinary clinic, instrumental methods were carried out in the radiology department, morphological examination was conducted by V.S. Abdullaev, associate professor of the department of pathological anatomy. conducted by Collagen type XXVI was determined by the IFA method at the private clinic "BIOSTOMNUR" during pregnancy and 3 and 6 months after delivery.

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 2). Significant differences between the study group and the comparison group were the amount of Lactobacillus spp (in group I - 6.2±0.1 CFU/ml; in group II - 4.0±0.2 CFU/ml; $p<0.05$); Bifidobacterium spp. (Group I - 4.3±0.2 CFU/ml; Group II - 3.1 ±0.2 CFU/ml; $p<0.05$); Enterococcus spp. (in group I - 3.7±0.2 CFU/ml; in group II - 5.2±0.3 CFU/ml; $p<0.05$); S. aureus (in group I - 3.8±0.3 CFU/ml; in group II - 5.3±0.2 CFU/ml; $p<0.05$) Candida spp. (in group I - 3.1±0.2 CFU/ml; in group II - 4.4±0.3 CFU/ml; $p<0.05$).

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Table 2

State of vagina microflora, CFU/ml

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

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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 select a risk group and exclude complications of the act of childbirth:

- General clinical and standard laboratory examination at 36 weeks
- Determination of 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.

The presence of a smooth scar in the uterus (morphologically, the lower segment corresponds to the normal myometrium) leads to a significant

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decrease in obstetric and perinatal losses. The rationale for the possibility of conservative delivery in a strictly selected group of women after caesarean section indicates complete morphofunctional recovery of the transversely cut lower uterine segment.

Thus, according to the diagnostic methods, in 31 (45.58%) 66 women in the main study group I and in 37 (100.0%) women in the comparison group, the scar on the uterus was expressed as "soggy" scars, evaluated with full-blooded capillaries and small-caliber vessels. It is expressed sonographically by the presence of various fibroblastic elements located between them.

CONCLUSION

Clinical data, objective examination, US and dopplerometry, and amount of collagen type XXVI can be accepted as assessment criteria for the diagnosis of post-surgical scar condition in women with uterine scar.

The average concentration of type XXVI collagen in group II during pregnancy was 252.28 ± 17.5 ng/ml, and after rehabilitation it was 363.1 ± 48.4 ng/ml. In group I, the average concentration of type XXVI collagen was 328.22 ± 17.5 ng/ml, and a significant decrease was noted after delivery - 164.12 ± 6.25 ng/ml. In the clinical assessment of the amount of type XXVI collagen, its increase was reflected in the increase in the thickness of the scar area of US and had a linear correlation (Spearman's correlation coefficient R=0.015, sensitivity - 83.8%, specificity - 91%). The optimal delivery tactics directly depends 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.

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