



REHABILITATION OF PATIENTS WITH UTERINE SCAR

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ABSTRACT

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. The goal of the work optimize rehabilitation methods in the postoperative period.

KEYWORDS

Viability criteria, uterine scar, cesarean section (CS), type XXVI collagen, rehabilitation.

INTRODUCTION

CS often has a certain impact on the subsequent reproductive activity of women: infertility, miscarriage, spontaneous abortion, 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).

In 2000, the American Association of Obstetricians and Gynecologists published two goals regarding cesarean sections to be achieved by 2010.

1. The percentage of CS in first-time mothers with cephalic presentation after the completed 37th week of pregnancy should be reduced by 15.5%.

2. The percentage of vaginal births after cesarean section in women with a history of one CS should be increased by 37%. None of these goals could be achieved, and in the USA the rate of repeat CS reaches 40% [8, 13].

The authors indicate that the increase in the number of births by CS in recent years is also due to the fact that women with a history of cesarean section have a more than 90% chance of delivering by CS in a subsequent pregnancy, thereby increasing the total number of CS in the future [36, 82, 157].

Having analyzed the data from recent studies, we can identify the four most common indications for repeat CS in developed countries [3, 7]:

- 1) previous pregnancy, birth by CS;
- 2) anomalies of labor;
- 3) fetal distress;

4) breech presentation.

A study conducted by WHO showed that an increase in the incidence of CS is associated with an increase in the frequency of antibiotic prescriptions in the postpartum period, an increase in the incidence of severe maternal morbidity and mortality. An increase in the rate of CS above 15% is not recommended by WHO, since it does not reduce the rates of perinatal morbidity and mortality among children born by CS compared with those among infants born vaginally [9, 12].

According to the literature, maternal mortality associated with CS (40 per 100,000 live births) is 4 times higher than for all types of vaginal births (10 per 100,000), and 8 times higher than for normal vaginal births (5 per 100,000) [3, 5].

Scientists at many regional and international forums of obstetricians and gynecologists in recent years have widely discussed the need to reduce the frequency of surgical delivery and attempts are being made to determine its optimal level. According to scientists, despite the low population health index, the increase in severe somatic and gynecological pathologies, as well as the increase in the number of patients with one or more CS, disruption of the intrauterine condition of the fetus, a decrease in the frequency of CS will not occur soon.

The purpose of the study was to optimize rehabilitation methods in the postoperative period.

Materials and methods: The scientific work is based on the analysis of the results of a comprehensive examination and dynamic monitoring of 103 patients of reproductive age with 1 scar on the uterus after cesarean section. The age of the participants was from 18 to 40 years, and the average age was 24.5 ± 4.1 years.

Based on the purpose of the study, this contingent of women was divided into 2 groups according to the use of postpartum rehabilitation (Fig. 1).

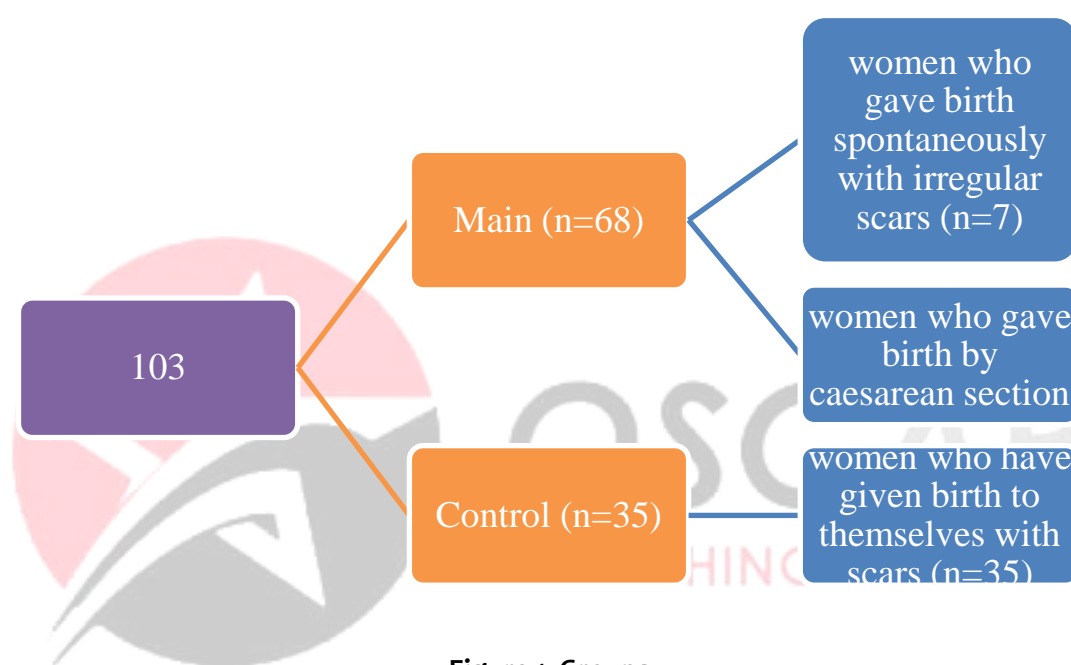


Figure 1. Groups

According to the method of rehabilitation, the main group consisted of 68 women who underwent complex rehabilitation measures, and they were made up of all women with scar failure and all women who underwent caesarean section. The comparison group was made up of 35 obstetricians included in the usual postnatal standards according to protocol No. 5 (registered by the Center for the Development of Medical Education of the Ministry of Health of the Republic of Uzbekistan on August 28, 2019 with the

number 245, Tashkent) consisted of patients who received treatment

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 process of creating an algorithm for delivery with a scar in the uterus, a moderately significant correlation was found between the method of delivery and the thickness of the uterine wall in the area of the scar ($p=0.0001$).

After rehabilitation, improvement of scar recovery and vascularization was evaluated according to ultrasound examination, and rehabilitation was associated with recovery ($p=0.0001$).

When the patients underwent UTT 3 months after delivery, the thickness of the uterine wall in the area of the scar in the main group of patients was on average 2.4 ± 0.04 mm (1.6; 4.0), and they had a scar in the comparison group, the thickness of the scar area was 1.9 ± 0.08 mm (1.0; 4.0), and defects in the scar area were detected. When the scar area was re-examined 6 months after delivery, the echographic thickness of the scar area was 3.7 ± 0.03 mm in the main group and 3.2 ± 0.05 mm in the comparison group.

It can be seen that the regeneration of the scar area was positive in both groups for 6 months, but the regeneration process was faster in the main group and showed positive dynamics in 3 months.

Thus, it can be seen that the thickness of the uterine wall in the area of the scar is restored from 1.8 mm to 3.7 mm after rehabilitation procedures in women with a scar on the uterus after cesarean section.

The amount of type XXVI collagen was also determined in women 3 months after childbirth.

3 months after delivery, collagen content increased from 328.22 ± 17.5 ng/ml to 363.1 ± 48.4 ng/ml in the main group, while in the results of the comparison group, a significant difference was observed, i.e., its amount decreased by 2 times. (from 322.28 ± 34.5 ng/ml to 164.12 ± 6.25 ng/ml). As a result of this, we can assume that the recovery in the body slowed down, and at the same time, the healing of the scar area was slow. Since this type of collagen is specific to the genitals, we can assume that in this group, it was used to restore the uterus to its original state after childbirth, which led to a decrease in the overall index.

And in the main group, the local effect of rehabilitation procedures may have created good conditions for regeneration, improved recovery, and had a positive effect on collagen synthesis.

Nevertheless, positive dynamics were observed in both groups 6 months after childbirth, the amount of collagen in the main group was 388.42 ± 14.22 , and in the comparison group it was 221.18 ± 13.11 . It can be seen that the positive dynamics in the comparison group was lower than the thresholds considered alternative,

which is a risk factor for subsequent pregnancy and childbirth complications.

Based on these results, we have developed an EHM program based on the need and method of application of rehabilitation measures for women who have undergone cesarean section and registered it with the Ministry of Justice of the Republic of Uzbekistan (DGU #18289, registered 08/29/2022).

Based on the UST data and type XXVI collagen content, we calculated the correlation relationship and the Spearman correlation coefficient. It was found that there is both a direct linear and an inverse relationship between these indicators. That is, an increase in the amount of type XXVI collagen was expressed by an increase in the thickness of the scar area in UST (Fig. 2), and the Spearman correlation coefficient was equal to $R = 0.015$.

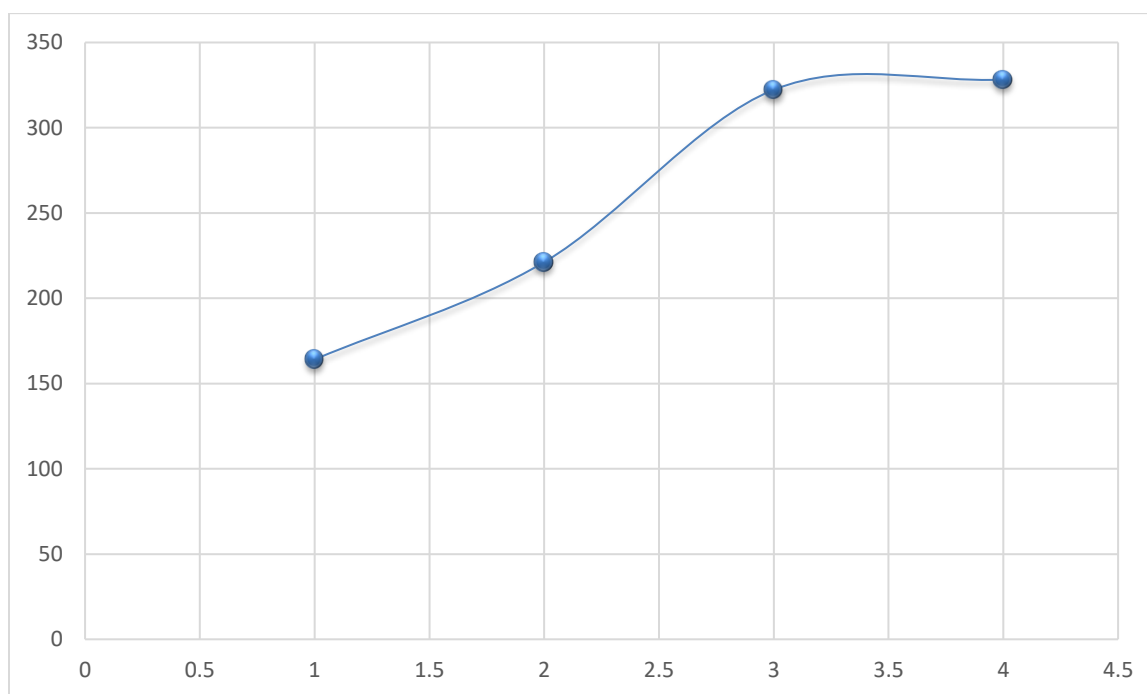


Figure 2. Correlation between UST data and type XXVI collagen content indicators

CONCLUSION

In the early postpartum period, the use of rehabilitation methods in women who gave birth by natural childbirth, despite the symptoms of post-birth control and scar deficiency, showed an improvement in

their general condition, rapid recovery of the genitals after childbirth. showed. This condition was expressed by the restoration of the size of the uterus in UTT, the restoration of the scar area, and the improvement of

the indicators of collagen type XXVI after 3 and 6 months.

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