PREDICTING THE COURSE OF PREGNANCY IN WOMEN WITH A SCAR ON THE UTERUS AFTER CESAREAN SECTION

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Abstract: C-section (CS) is the most common type of delivery, and its frequency has tripled over the last decade and continues to increase. This leads to an increased number of women with a uterine scar who become pregnant again, and their delivery can be difficult due to the risk of uterine rupture along the scar. One of the most significant factors to consider when deciding on the mode of delivery for patients with a previous C-section is the condition of the scar. In obstetric practice, the assessment of the anatomical and functional characteristics of the scar is typically based on an external examination of the abdomen, palpation of the scar, and a vaginal examination to evaluate the degree of cervical maturity.

Key words: C-section, endometriosis, ectopia.

Introduction:

One of the ost significant factors considered when deciding on the mode of delivery for these patients is the condition of the scar from the previous C-section. The data on the strength of a transverse uterine scar varies widely, from 22% to 50% according to different authors. In obstetric practice, the evaluation of the anatomical and functional characteristics of the scar is typically based on an external examination of the area on the abdomen, palpating the scar, and vaginal examination to assess the degree of cervical maturity.

The aim of the study was to predict the risk of obstetric complications in patients with uterine scar after cesarean section by optimizing ultrasound diagnostic methods.

Research methodology and methods

A single-center open prospective controlled

trial ("case -control") was conducted. The study included 150 pregnant women with a scar on the uterus after CS. At the initial appointment and ultrasound examination in the first trimester of pregnancy, the most detailed assessment of the condition of the scar on the uterus was carried out. To solve the tasks set and to predict the course of pregnancy and

complications with the help of an expert assessment of scars at the first treatment

Two groups of patients were formed (in the first trimester of pregnancy): 1 – a "good" or wealthy scar, 2 – a "thin" scar.

Group 1 – "wealthy" scar – 64 observations – preserved

myometrium in the scar area of 3 mm or more;

Group 2 – "thin" scar – 86 observations – preserved (residual) myometrium in the scar area less than 3 mm, up to the complete absence of myometrium in certain areas, which was divided into two subgroups during the observation process.

Results: The average age of patients in both groups was comparable and was 32 years (med=32 q1=29 q2=36 in group 1 and 31 years (med=31 q1=29 q2=35) in group 2. The minimum age was 20 years, the maximum was 58 (pregnancy occurred with the help of ART). A history of drug-induced allergic reactions was observed only in 1 (1.6%) patient of group 1.

Analyzing the entire group of examined women, it should be noted that 28 (18.7%) pregnant women had cardiovascular diseases, 8 (5.3%) had respiratory diseases, 17 (10.7%) had kidneys and urinary tract, including 7 (4.7%) had chronic pyelonephritis.

Endocrine diseases were present in 32 (21.3%) pregnant women, including obesity in 14 (9.3%): grade 1 in 9 (6%), grade 2 in 3 (2%), grade 3 morbid obesity in 2 (1.3%). Type 1 diabetes mellitus – in 1 (0.7%), the second type – in 2 (1.3%).

11 (17.2) patients had gynecological diseases. 1 groups and 8 (9.3%) – the second: uterine fibroids – 11% and 3.5% (a history of myomectomy was performed in one

patient of the first group), ovarian tumors - 4.7 and 2.3%, developmental abnormalities – 1.6% and 1.2%, endometriosis – 1.6% and 1.2%, cervicitis and ectopia cervix – 3.2% and 1.2%, respectively.

Only 4 patients, all from group 1, indicated the presence of endometritis after CS.

The technique of ultrasound examination of the scar was based on the following principles: During the initial examination of the scar on the uterus, we studied extracts from the history of childbirth from obstetric hospitals about the cesarean section performed, indicating the date of the operation, the technique of the operation and the technique of suturing the incision, if necessary, the pregnant woman was asked additional questions about the course of the early and late postoperative period, since, unfortunately, the "cesarean section passport" does not found proper dissemination in wide practice, and the information presented in standard extracts was often insufficiently informative and completely did not contain information about the course of the late postoperative period, which was insufficient for preliminary "clinical" and subsequent echographic assessment of the scar.

To determine the condition of the scar on the uterus, varioussensors were used to optimally visualize the area of interest – convexic, microconvex intracavitary or linear.In the first trimester of pregnancy, after previous operations on the uterus, we used a transvaginal sensor, in the second trimester of pregnancy a transabdominal convex sensor, during the study in the third trimester – a combination of transabdominal and vaginal scans and in some cases – a linear sensor (in patients without excess subcutaneous tissue on the anterior abdominal wall).

The study was carried out according to a standard technique – obtaining a sagittal section with an assessment of the localization of the scar, then a transverse scan to determine the localization of the lateral edges of the scar, then a series

of oblique sections. Identified and evaluated:

-scar position;

-the presence of a "niche" according to the DELFI consensus (a depression in the place of the CS scar with a depth of at least 2 mm);

-the thickness of the myometrium in the area of the scar or lower uterine segment;

-presence/absence of inclusions in the structure of the scar;

the vascular network of the uterus and the scar area;

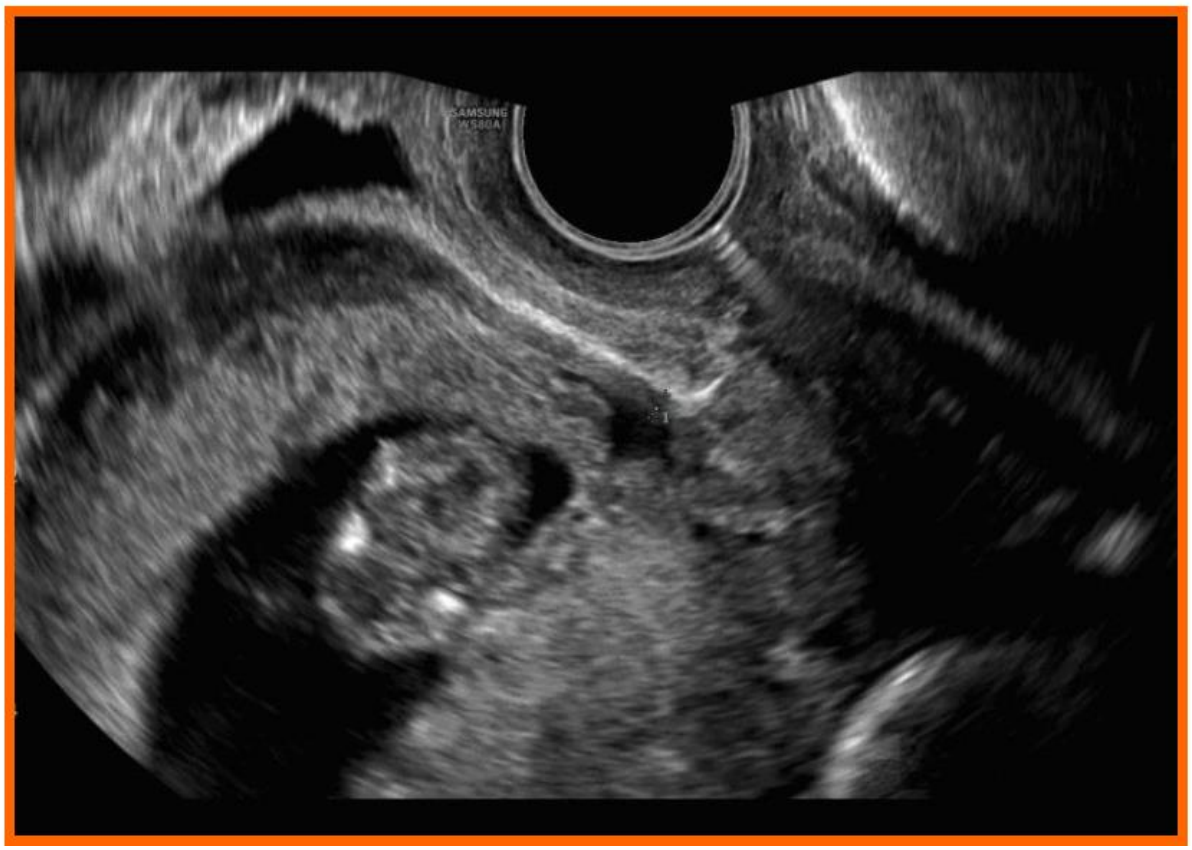
The state of the vesico-uterine fold, Douglas space, parametrization;

the position of the fetal egg in the cavity according to the COS rule (when examined in the first trimester of pregnancy).

During the study, a transvaginal sensor was used in the 1st trimester of pregnancy, a combination of transabdominal and vaginal scans was used in the second and third trimesters of pregnancy, and in some cases a linear sensor was used (in patients without excess subcutaneous tissue on the anterior abdominal wall).

Assessment of the condition of the uterine scar in early pregnancy

In the first trimester of pregnancy, direct visualization of the scar on the uterus was possible in all 150 pregnant women, in 100% of cases.



An echogram. The first trimester of pregnancy. A wealthy scar. Presentation of the chorion.

Conclution.

The issues of morphological and functional assessment of a scar on the uterus outside and during pregnancy, the possibilities and problems of spontaneous labor in women with a scar on the uterus are always actively and emotionally discussed by communities of obstetricians and gynecologists and ultrasound diagnostics doctors (as the most in–demand and involved in the examination of these patients at different stages of their lives), while the most These issues arise acutely and are discussed during pregnancy. An avalanche-like increase in frequency that defies any logical explanation CS all over the world (for example, 56% in Brazil) and including in Russia (29.3%) and the increasing number of women with operated uterus in the population makes this problem even more urgent.

There are serious terminological problems in the description and especially assessment of the scar on the uterus after CS by both obstetricians and gynecologists and ultrasound diagnostics doctors, who describe the scar and its changes as "thinning", "sharp thinning", "gaping", "spreading", and the scar as "thin", "transparent", "fat", "normal", "wealthy", "insolvent", "defective", "problematic", etc.

The National Guide to Obstetrics treats a scar on the uterus how "....the area of the uterus in which surgical interventions were performed [cesarean section (CS), myomectomy, reconstructive plastic surgery]." It is also noted that the concept of "scar on the uterus after CS", adopted in our country, is not entirely successful, since it is often not detected during repeated surgery. Foreign authors usually use the terms "previous CS" and "transferred myomectomy".

Our study showed that with each subsequent COP, the risk of complications increases. The number of operations preceding this pregnancy had a direct impact on the quality of the uterine scar and pregnancy outcomes. So, placenta accrete there were 2 out of 8 patients with a history of three CS (25%). 7 out of 8 patients (87.5%) with

three CS in the anamnesis were in the group with thin scars, if in group 1 (good scars) they amounted to only 1.6%, then in group 2 – 8.1% (differences are statistically significant, P=0.04), and in the group of insolvent scars (2b) – 13.9%. The outcomes in patients with three CS in the anamnesis were unfavorable: 5 out of 8 pregnant women were delivered within less than 30 weeks, CS – at 3; CS, metroplasty – at 1; CS, hysterectomy – at 1; fetal removal, metroplasty – at 3.

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