

THE ROLE OF ULTRASONIC STUDY IN THE DIAGNOSIS OF UTERINE SCAR FAILURE IN PREGNANT WOMEN AFTER CESAREAN SECTION

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Abstract. The significant frequency of cesarean sections, which has been 15-30% or more in recent years, leads to a pressing problem — an increase in the number of women of reproductive age with a uterine scar. The postulate "once a cesarean section — always a cesarean section", which is dominant in the management of this contingent of women, should become a thing of the past. According to the authors, the frequency of conservative delivery of women with a uterine scar after a cesarean section ranges from 30 to 70%. The choice of tactics for managing labor in such women mainly depends on the condition of the uterine scar. Difficulties in assessing the condition of the uterine scar during pregnancy are due to the lack of expression of clinical symptoms and limitations in the use of objective research methods. According to the authors, such a clinically significant symptom as local pain during palpation in the lower abdomen with scar failure is detected only in 18.3% of cases. Methods for examining the condition of the uterine scar during pregnancy are very limited, and practically the only one is ultrasound scanning (ultrasound).

Keywords: uterine scar, niche, isthmocele, ultrasound.

In a normal pregnancy, ultrasound examination of women with a uterine scar should be performed at least three times (upon registration, at 20-24 weeks of pregnancy, and at 30-32 weeks). It is advisable to perform echography of the uterine scar at 34-36 weeks of pregnancy with a formed lower uterine segment, which is when ultrasound examination is most informative and has the greatest practical significance.

Indications for the first cesarean section were distributed as follows: abnormal labor activity that could not be corrected with medication — 15 women (38.5%), clinically contracted pelvis — 8 (20.5%), breech presentation of the fetus — 8 (20.5%), increasing severity of chronic fetal hypoxia — 3

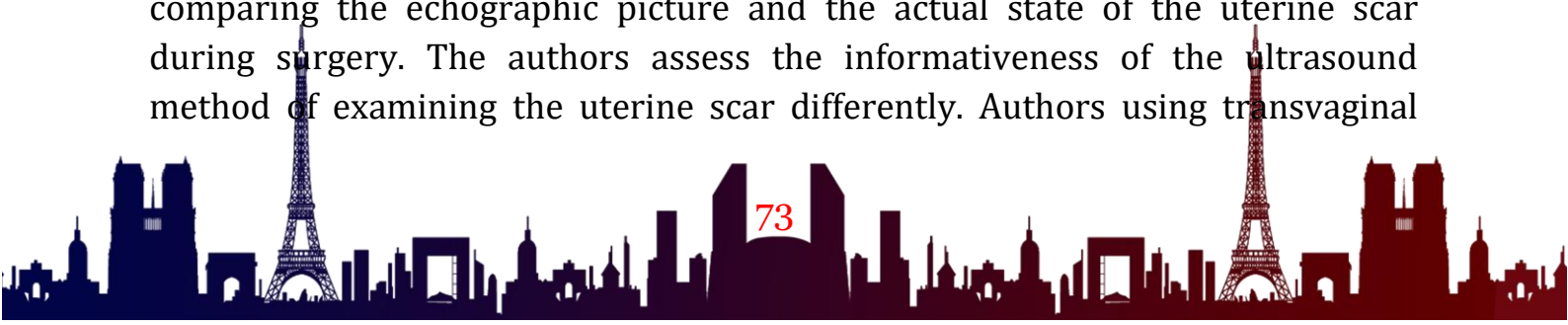
(7.7%), premature placental abruption — 2 (5.1%), large fetus — 2 (5.1%), severe gestosis — 1 woman (2.6%). Clinical signs of scar failure in the form of discomfort, pain in the lower uterine segment, local tenderness in the lower abdomen were determined in 6 pregnant women (15.3%). In these cases, the clinical data coincided with the echographic picture of scar failure.

During ultrasound examination of the myometrium in the lower uterine segment, the scar was carefully assessed based on the following features: measurement of the overall thickness, uniformity of the scar, presence of thinning areas, scar structure, presence of acoustically dense areas indicating connective tissue degeneration of the scar area, scar contours and its echogenicity. A uniform scar 4-5 mm thick, uniform in thickness throughout, with clear even contours, without thinned areas, acoustic compactions, with normal echogenicity of the lower segment, similar to that in other parts of the uterus, was considered viable during ultrasound examination.

A healthy scar was diagnosed in 25 pregnant women (64.2%). Of this group, 3 pregnant women (12%) were delivered vaginally, 22 pregnant women were re-operated on a planned basis for various obstetric indications. Of these, 9 women (40.9%) had a clinically narrow pelvis, 3 (13.6%) had breech presentation of the fetus, 5 (22.7%) had a large fetus, 4 (18.2%) had a severe form of gestosis, 1 pregnant woman (4.6%) had the placenta located in the scar area.

An insolvent scar was diagnosed by ultrasound in 10 pregnant women (25.6%), of whom 9 women were operated on urgently and one on a planned basis. During a repeated planned cesarean section, the uterine scar was insolvent in 7 pregnant women, false-positive results were observed in 3 women, and scar insolvability was not confirmed during the operation.

Thus, as a result of the study of the scar area during surgery in 14 women with a questionable or incompetent scar during ultrasound, it was found that the coincidence of the echographic assessment and the actual state of the uterine scar was confirmed during surgery in 9 of 14 pregnant women (64.3%). In 4 cases out of 25 (16%) there was a false-negative result. A false-positive result was determined in 5 cases out of 14 (35.7%). The coincidence of the echographic and intraoperative results, according to our data, was 64.3% (false positive result - 35.7%, false-negative - 16%). The table shows the results of comparing the echographic picture and the actual state of the uterine scar during surgery. The authors assess the informativeness of the ultrasound method of examining the uterine scar differently. Authors using transvaginal



probes and a combination of B-mode ultrasound with color Doppler mapping (CDM) to assess the state of the uterine scar have a higher percentage of matches (from 57.5% to 76%) and a lower percentage of false positive results (from 21.3% to 7%).

"Scar failure", "incomplete uterine scar", "niche", "isthmocoele", "uteroperitoneal fistula", "post-caesarean section scar defect", "post-operative scar thinning" - these are the most common definitions of this condition found in the literature. There is currently no single generally accepted term describing this pathological condition outside of pregnancy. In our opinion, the most accurate description of the essence of changes in the scar area outside of pregnancy is the terms "defect" or "thinning" of the uterine scar, which in some cases can be supplemented by a morphological characteristic of the scar type - with or without niche formation. A niche is a hypoechoic zone along the inner surface of the uterus in the post-caesarean section scar area, which is an asymmetric myometrial defect.

The incidence of uterine scar defects after CS varies significantly and is within 24-70% [5-7]. At the same time, according to O. Osseir et al., the true prevalence of this condition can reach 61% after the first CS and 100% after three CS. The vast majority of cases of scar thinning after CS, even with niche formation, are asymptomatic and are detected by chance during ultrasound examination (US). The clinical picture with significant uterine scar defects is most often characterized by postmenstrual bleeding from the genital tract (15.2-82.0%), menorrhagia (12-38%), pelvic pain, the onset of which is associated with the CS operation (4.5-11.0%), dyspareunia (3.4-9.6%). Most patients are characterized by a combination of symptoms. According to literature data, the risk of developing secondary infertility after a CS can be 4-19%, while a negative factor is considered to be the accumulation of mucus or blood in the area of the defect or niche, which leads to the accumulation of fluid in the uterine cavity and disruption of sperm function and the implantation process.

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