

PREGNANCY ON CAESAREAN SECTION SCAR: ABOUT A CASE AND REVIEW OF THE LITERATURE

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INTRODUCTION

Scar pregnancy is defined by implantation of the gestational sac in the scar or dehiscence from a previous caesarean section, ectopic cervico-isthmus or scar location.^[1] The incidence is estimated between 1/1800 and 1/2216 pregnancies.^[2]

It is a potentially hemorrhagic pregnancy, hence the interest of an accurate and early diagnosis for the choice of the therapeutic attitude.^[3]

We are going to report the case of a patient who presented to the emergency room with first-trimester metrorrhagia.

OBSERVATION

This is a 32-year-old patient, with no particular history, G2P1: mother of a 3-year-old child delivered by caesarean section for macrosomia, G2: is the current pregnancy estimated at 8 weeks of amenorrhea according to the date of last menstrual period, who consulted at the gynecological emergency department for pelvic pain such as expulsive colic with minimal blackish metrorrhagia.

Clinical examination finds a conscious patient, with blood pressure at 110/60mmhg, tachycardia at 112/min, afebrile, slightly discolored conjunctivae. Her abdomen was supple, defenseless. Speculum examination found a purplish gravid cervix with minimal blackish bleeding of endo-uterine origin. On vaginal examination the uterus was increased in size, no lateral-uterine mass. The initial endovaginal pelvic ultrasound revealed an intrauterine gestational sac corresponding to a term of 7 weeks of amenorrhea, implanted next to the old caesarean section scar. Cardiac activity from the embryo was present (Figure 1). Ultrasound

found no lateral uterine mass or pelvic effusion. His biological assessment was without abnormalities, the BHCG level was 4600.

The patient received conservative medical treatment by systemic injection of methotrexate 1mg/kg, with monitoring of the decrease in BHCG every 48 hours until negativation. Monthly ultrasound monitoring was instituted until complete disappearance of the egg sac.



DISCUSSION

Caesarean section scar pregnancy is a rare form of ectopic pregnancy that is life-threatening to the mother.^[4] Several factors have been implicated in the occurrence of this form of pregnancy: the number of previous caesarean sections and intrauterine procedures (curettage, manual uterine revision), as well as in vitro fertilization (IVF) techniques with embryo transfer.^[5]

From a pathophysiological point of view, a micro-defect of the hysterotomy scar would allow the invasion of the uterine muscle by the blastocyst, these caesarean sections being often programmed, the less solicited and less mature lower segment would not allow an optimal quality of healing and would favor ectopic implantation of the egg.^[6]

The positive diagnosis is based on a bundle of arguments highlighting the patient's history and clinical manifestations, including abdominal pain and bleeding, which can range from simple spotting to fatal hemorrhage, spontaneous or iatrogenic following curettage.^[7]

Ultrasound, performed through the endovaginal route, makes it possible to establish a precise and early diagnosis. It is based on the criteria established by Vial in 2000: A uterine void without contact with the gestational sac, empty cervical canal without contact with the

gestational sac, in sagittal section, implantation of the gestational sac on the anterior wall.^[8] The indirect ultrasound signs are the absence of adnexal mass and effusion in the cul-de-sac of Douglas, unless the pregnancy is complicated by uterine rupture, the reduction in the thickness of the wall between the gestational sac and the bladder, which reflects the depth of the implantation as well as a peri-trophoblastic hypervascularization, objectified by color Doppler.^[9]

The treatment of pregnancies on caesarean section scar must be early and active because of the major risk of hemorrhage or uterine rupture involving the vital and functional uterine prognosis. Medical treatment using Methotrexate acts on actively proliferating tissues, such as fetal cells, and inhibits trophoblast growth. The route of administration can be local or systemic, it can be completed by echo-guided aspiration.^[10] This component requires armed monitoring of the Bhcg level until negativation over a period of 4 to 6 weeks, with ultrasound monitoring of the disappearance of the gestational sac. Laparoscopy and laparotomy can allow complete resection of the scar and the trophoblastic tissue, but they are used less because of the effectiveness of conservative medical treatment.^[11] A resection by hysteroscopy has the advantage of clearly visualizing the pregnancy and allowing the realization of a selective coagulation of the vessels located at the level of the implantation site. Hysterectomy is less and less indicated due to the improvement of diagnostic means before the occurrence of rupture.

CONCLUSION

A low gestational sac inserted during the first trimester on a scarred uterus raises suspicion of a cesarean scar pregnancy, the diagnosis of which is confirmed based on the patient's history and ultrasound appearance.

A misdiagnosis can be life-threatening, conservative treatment is the most used with recourse to radical treatment in the event of hemorrhagic complications.

REFERENCES

1. Belinga, Etienne, Jérémie Mbo Amvene, Chatour Hanen, Ali El Housseini, Michel Voulgaroupoulos, Gilles Dauplain, Alain Cordesse, and Samuel Nko'o Amvene. "Pregnancy on caesarean section scar: contribution of ultrasound in diagnosis and management". *HEALTH SCIENCES AND DISEASE* 15, No. 2 (May 5, 2014). <https://www.hsd-fmsb.org/index.php/hsd/article/view/379>.

2. "Cesarean scar ectopic pregnancies: etiology, diagnosis, and management - PubMed". Accessed June 9, 2022. <https://pubmed.ncbi.nlm.nih.gov/16738166/>.
3. "Caesarean section scar pregnancy: about a case and review of the literature - ProQuest". Accessed June 9, 2022. <https://www.proquest.com/openview/3d80bdf6df419226992a6ca641cf6691/1?pq-origsite=gscholar&cbl=2045576>.
4. Masson, Elsevier. "CLINICAL FACT DIAGNOSIS OF ECTOPIC PREGNANCY ON CAESAREAN SECTION SCAR". EM-Consult. Accessed June 9, 2022. <https://www.em-consulte.com/article/122587/fait-clinique-diagnostic-d-une-grossesse-ectopique>.
5. Maymon, R., R. Halperin, S. Mendlovic, D. Schneider, and A. Herman. "Ectopic Pregnancies in a Cesarean Scar: Review of the Medical Approach to an Iatrogenic Complication". Human Reproduction Update 10, No. 6 (December 2004): 515-23. <https://doi.org/10.1093/humupd/dmh042>.
6. Roberts, H., C. Kohlenber, V. Lanzarone, and H. Murray. "Ectopic Pregnancy in Lower Segment Uterine Scar". The Australian & New Zealand Journal of Obstetrics & Gynecology 38, No. 1 (February 1998): 114-16. <https://doi.org/10.1111/j.1479-828x.1998.tb02976.x>.
7. Saad, Benali, and Kouach Jaouad. "Pregnancy on scar: about 4 cases with review of the literature". PAMJ Clinical Medicine 2 (2020). <https://doi.org/10.11604/pamj-cm.2020.2.155.21939>.
8. Seow, K.-M., L.-W. Huang, Y.-H. Lin, M. Yan-Sheng Lin, Y.-L. Tsai, and J.-L. Hwang. "Cesarean Scar Pregnancy: Issues in Management". Ultrasound in Obstetrics & Gynecology: The Official Journal of the International Society of Ultrasound in Obstetrics and Gynecology 23, no 3 (March 2004): 247-53. <https://doi.org/10.1002/uog.974>.
9. Seow, Kok-Min, Jiann-Loung Hwang, Yieh-Loong Tsai, Lee-Wen Huang, Yu-Hung Lin, and Bin-Chwen Hsieh. "Subsequent Pregnancy Outcome after Conservative Treatment of a Previous Cesarean Scar Pregnancy". Acta Obstetrica Et Gynecologica Scandinavica 83, no 12 (December 2004): 1167-72. <https://doi.org/10.1111/j.0001-6349.2004.00445.x>.
10. Vial, Y., P. Petignat, and P. Hohlfeld. "Pregnancy in a Cesarean Scar". Ultrasound in Obstetrics & Gynecology: The Official Journal of the International Society of Ultrasound in Obstetrics and Gynecology 16, No. 6 (November 2000): 592-93. <https://doi.org/10.1046/j.1469-0705.2000.00300-2.x>.