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CESAREAN SCAR PREGNANCY

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Introduction. Gynecologists & radiologists all over the world have reported an increase in Cesarean Scar Pregnancy (CSP) with an incidence of 1 per 1800 to 2600 pregnancies. 52% of CSP's had reported only 1 prior C-section. CSP refers to implantation of placenta in or on the scar of a previous C-section. This poses a diagnostic challenge in the obstetrics department with main diagnostic tool being Transvaginal Ultrasound (TVS). Two distinct types of CSP are identified: Type-1 CSP refers to implantation on the well healed scar of previous C-section, while Type-2 refers to the implantation of placenta occurring within the "niche" or defect of scar that hasn't healed completely. Radiologically it poses as a challenge because it requires an immense amount of expertise to differentiate CSP from a low intrauterine pregnancy, cervical ectopic pregnancy and also a miscarried sac passing through the cavity.

Aim: to analyze the current knowledge on pregnancy in a cesarean scar.

Materials and methods. Most recent scientific articles illustrating the problem of diagnosis and management of cesarean scar pregnancy were analyzed. The search included PubMed database, Cochrane database, and Scopus database of scientific journals.

Results and their discussion. Diagnosis of CSP is done by Transvaginal ultrasonography and 5 main radiological markers are identified: an empty uterine cavity; trophoblast sac implanted at the site of previous C-section or a triangular shaped gestational sac in the middle; thin/absent layer of myometrium between sac and urinary bladder; prominent placental circulation at the site of defect; empty endocervical canal.

The Society for Maternal-Fetal Medicine confirmed the presence of medicinal, surgical, and minimally invasive therapies for CSP management but the optimal treatment remains unknown; the main recommendation however, is to avoid expectant management of CSP.

Medical interventions to treat CSP include systemic methotrexate (MTX) injection, local MTX injections into the gestational sac, local potassium chloride (KCl), hyperosmolar glucose, and crystalline trichosanthin injections. Injections of KCl may be administered instead of or along with methotrexate, particularly when a fetal heartbeat is present. An asymptomatic woman who is 8 weeks pregnant, has hCG levels of 5000, a cardiacally active embryo, and a myometrial thickness of 2 mm between the CSP and the bladder is eligible for conservative medical care. Its negative aspects are that it could take 4–16 weeks for β-hCG to drop to normal, the threat of rupture and haemorrhage, and the non-decision of a probable alteration at the extent of the C-phase scar.

Operative interventions to treat CSP include uterine artery embolization (usage of uterine artery embolization (UAE) reduces the risk of subsequent haemorrhage in patients who undergo medical treatment or surgery), suction curettage under ultrasound guidance, ultrasound-guided vacuum aspiration after local injection of lauromacrogol or after UAE, hysteroscopic resection via vagina, repairing the scar via abdominal approach using laparoscopic or open abdominal surgery.

At times unfortunately, one surgical procedure used primarily to evacuate a CSP may lead to a secondary major procedure (hysterectomy) being performed due to severe hemorrhage resulting as a consequence of the primary procedure.

Conclusion: early detection of CSP has a paramount clinical importance and diagnosis is based primarily on ultrasound examination. Currently, there is not universally agreed upon management protocol of the treatment of cesarean scar pregnancy. There is a wide range of management options in the literature, and many of them can to lead to severe bleeding complications, which can result in loss of fertility or even maternal death.