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A Case Report

SCAR ECTOPIC PREGNANCY: A CASE REPORT**Mariam Ali Alodail, Zahra Ahmed Alhammad, Zahra Wasel Alismail, Amnah Ahmed Alomran, Alhowra Mohammad Albattat**

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Abstract

Background: Cesarean section scar ectopic pregnancies are a rare complication of pregnancy that may follow previous hysterotomy for any cause, uterine manipulation, and in vitro fertilization. It has become more common with the increasing cesarean sections as a mode of delivery worldwide.

luckily, the use of first- trimester ultrasound imaging has resulted in a significant number of these pregnancies being diagnosed and managed early.

Case presentation: We report a case of a 43 years old Saudi female who had three previous cesarean sections and abortion for six times at first trimester which indicated four evacuation and curettage procedures. She presented with mild vaginal bleeding without abdominal pain or other complain. She had no history of contraception use or underlining gynecological illness. Her quantitative serum β -human chorionic β -HCG is 8091 mIU/ml. Transvaginal ultrasound (TVU) showed monochorionic amniotic gestational sacs, both are non-visible the sacs The ectopic gestation was managed with two doses of methotrexate and one intragestational dose, and then evacuation and curettage was done, and B-HCG levels dropped significantly.

Conclusions: Uterine scar ectopic pregnancies are a diagnostic challenge that require a high level of suspicion during clinical imaging and follow-up. A missed diagnosis with delayed management may lead to uterine rupture, severe hemorrhage, and maternal death.

Keywords: cesarean scar ectopic pregnancy, Diagnostic challenge, management.

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BACKGROUND:

Cesarean section scar ectopic pregnancy is an uncommon type of ectopic pregnancy, affecting approximately 1 out of 2000 pregnancies.[1][2] The incidence of cesarean section scar ectopic pregnancy is directly proportional with the increase in primary and repeat cesarean sections. The incidence of primary cesarean section world widely is 18.6% of all births.[3] Furthermore, it has been reported that hysterotomy scar ectopic pregnancy occurs following abnormally adherent placentation, manual removal of placenta, myomectomy, uterine evacuation, metroplasty, in vitro fertilization and hysteroscopy. [4]

Hysterotomy scar ectopic pregnancies can be classified into two types, type one scar ectopic pregnancies is an abnormal implantation of gestational sac in the myometrium, while type two scar ectopic pregnancies the gestational sac grow exophytically toward the uterine serosa. [4] Type 2 pregnancies have an ominous prognosis because they may result in spontaneous uterine rupture, hemorrhage, and maternal death. There is potential for loss of fertility should massive hemorrhage necessitate a hysterectomy. [4] The prognosis of type two scar ectopic pregnancy is poor because of the significant risk of sudden uterine rupture, morbid hemorrhage that indicate emergency hysterectomy resulting loss of fertility, and maternal death. [4]

The clinical picture of scar ectopic pregnancy is including first trimester vaginal bleeding and lower abdominal pain, or it can be asymptomatic and diagnosed incidentally. The best diagnostic method is by trans-vaginal ultrasound in addition to panoramic view by trans-abdominal ultrasound. Magnetic resonance imaging add a valuable rule in equivocal cases and confirm the diagnosis [1] There are different management options for scar ectopic pregnancy, expectant, medical (with metformin) and surgical depending on the presented case. [2,5] Other management option including vacuum aspiration to remove the ectopic scar. [6]

This case report aims to expose a diagnostic conundrum that clinicians might face. Cesarean scar ectopic pregnancies are a rare presentation that may be difficult to diagnose and for which a management option may be hard to choose

CASE REPORT:

A 43 years old Saudi female G10P3+6 pregnant 6weeks+2days of gestation presented to emergency department complaining of mild vaginal bleeding without abdominal pain or other complain. Her past

obstetric history is positive for previous three caesarian sections and abortion for six times at first trimester which indicate four evacuation and curettage procedures.

Her first four pregnancies end up with abortion at first trimester, three of them was managed with evacuation and curettage and the fourth abortion was managed conservatively. In her fifth and sixth pregnancy she delivered at term through cesarean section, the indications was failure of progress. Furthermore, she aborted her seventh pregnancy and was managed with evacuation and curettage. In her ninths pregnancy she delivered through caesarian section due to previous two caesarian sections. In her ninths pregnancy she aborted at first trimester and managed conservatively.

Her currant pregnancy is her tenth pregnancy which was spontaneous. She had no history of contraception use or underlining gynecological illness. She is medically free and she did not receive any medication before her presentation. She is a housewife nonsmoker or alcoholic. On examination she was vitally stable her temperature was 37.1C, her pulse was 89beat/minute, her blood pressure was 127/79 mmHg. Her cardiorespiratory and neurological examination revealed no abnormalities. Soft and lax abdomen without tenderness on abdominal examination. There were no contractions or on abdominal examination and pelvic examination were normal. Her quantitative serum β -human chorionic β -HCG is 8091 mIU/ml. Transvaginal ultrasound (TVU) showed monochoroinic amniotic gestational sacs, both are non-visible the sacs measure together 9mm. (write other findings at presentation)

Managent:

two doses of systemic methotrexate (IM injections) and one dose of intra-gestational sac injection, β -HCG droop significantly from 8091 mIU/ml to 643 mIU/ml after on week, the patient complaining of mild lower abdominal pain with persisting vaginal bleeding. Ultrasound showed distended lower uterine cavity at site of scar by echogenic lesion about 19*16mm with some peripheral vascularity. Collapsed gestational sac/ hematoma. Evacuation and curettage procedure was done and β -HCG dropped significantly to 185 mIU/ml.

DISCUSSION:

We present a case of a 43 years Saudi female patient who had three previous cesarean sections and four evacuation and curettage procedures. She presented initially with mild vaginal bleeding without

abdominal pain or other complain, Trans-vaginal ultrasound (TVU) was done and showed monochorionic monoamniotic gestational sacs, both are non-visible, the sacs measure together 9mm. Her quantitative serum β -human chorionic β -HCG is 8091 mIU/ml. She was then managed by two doses of systemic methotrexate (IM injections) and one dose of intra-gestational sac injection, β -HCG dropped significantly from 8091 mIU/ml to 643 mIU/ml, after one week, the patient started complaining of mild lower abdominal pain with persisting vaginal bleeding.

Ultrasound showed distended lower uterine cavity at site of scar by echogenic lesion about 19*16mm with some peripheral vascularity, Collapsed gestational sac/ hematoma. Evacuation and curettage procedure was done and β -HCG dropped significantly to 185 mIU/ml. Though our patient had undergone three previous cesarean sections procedures, one case series showed that most cesarean scar ectopic pregnancies occurred after only one C- section. So, the number of C- sections appears to have no effect as an independent risk factor [2, 7].

As in our patient's case, uterine scar ectopic

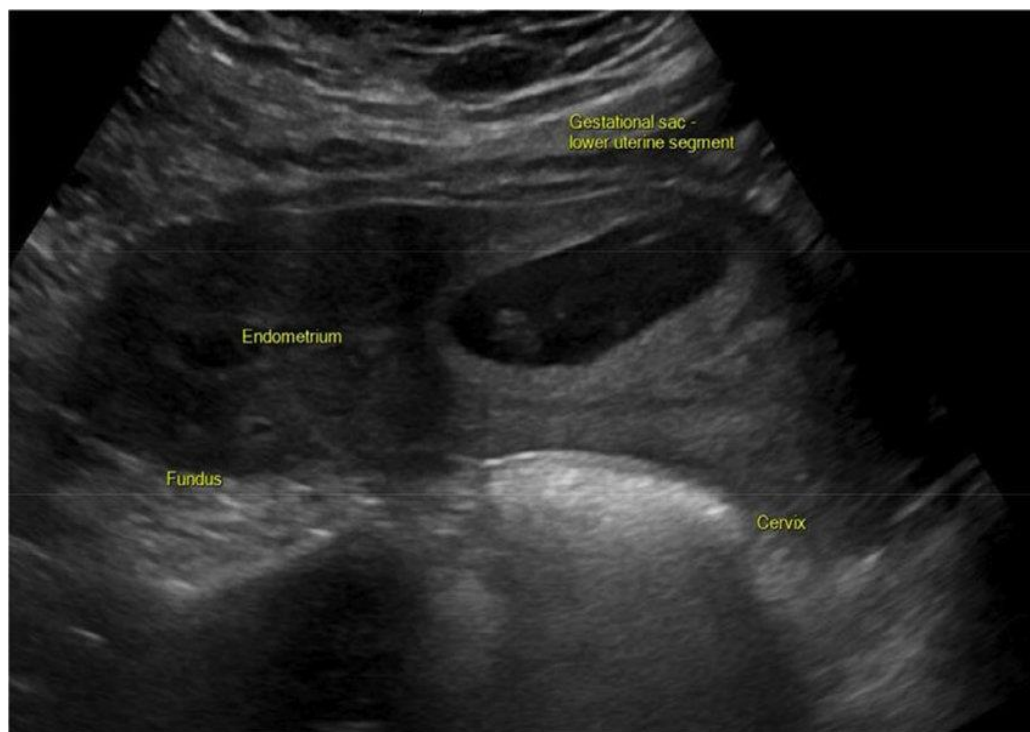
pregnancies can pose a diagnostic challenge. Our suspicion was raised because of her previous three cesarean sections. The differential diagnoses included inevitable miscarriage, cervical ectopic and cervico-isthmic pregnancy. Known diagnostic criteria for a C- section scar pregnancy are a gestational sac located anteriorly at the level of the internal os within a visible myometrial scar and functional trophoblast demonstrated on color Doppler imaging studies [8].

Methotrexate injection was our treatment of choice because the ectopic pregnancy was discovered early, the babies were not viable yet and the β -HCG levels at diagnosis was within the normal range.

The risk of recurrent scar ectopic pregnancy is low, 3.2–5.0% [2, 9]. Women who intend to continue childbearing should be informed of the low risk of recurrence but the potential serious effects. Even with a normal pregnancy, the woman is still at risk of complications of multiple hysterotomies, such as severe hemorrhage, abnormally implanted and adherent placenta, uterine rupture, and hysterectomy. Future pregnancies require careful specialist follow-up.



Cesarean section scars ectopic pregnancy a longitudinal view taken by trans-vaginal ultrasound. [10]



Sagittal trans-abdominal ultrasound demonstrating the characteristics of cesarean scar ectopic pregnancy: Low, anterior implantation of the gestational sac, absence of cervical involvement, extension toward the endometrium, and lack of normal endometrial cavity location. [11]

CONCLUSION:

Uterine scar ectopic pregnancies are a diagnostic challenge that require for clinicians and radiologists who are managing women with associated risk factors to maintain a high level of suspicion during clinical imaging and follow-up. A missed diagnosis with delayed management may lead to uterine rupture, severe hemorrhage, and maternal death. Trans-vaginal ultrasound scanning equipment and training should be readily available even in resource-limited areas. A screening tool for the assessment of patients at risk and a protocol for using MRI for suspicious cases should be available at every level of clinical care.

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