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Cesarean section scar ectopic pregnancy -a management dilemma: a case report

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Abstract

Background*: Cesarean section scar ectopic pregnancy is a rare complication of pregnancy that has increased following the increasing number of cesarean sections. It is important to have a high clinical suspicion in any patient who presents with first trimester bleeding and multiple previous cesarean deliveries. This is important because a delay in diagnosis can lead to increased maternal morbidity and mortality. Fortunately, the use of first-trimester ultrasound imaging has led to a significant number of these pregnancies being diagnosed. Early diagnosis leads to prompt management and improves the outcome by avoiding significant morbidity and allowing preservation of future fertility.*

Case Presentation: *We report a case of a 34year-old patient who had a history of two previous cesarean sections. She presented with twin viable cesarean section scar ectopic pregnancy that was diagnosed on the basis of transvaginal ultrasound imaging, and managed successfully by systemic and local (intrasac) Methotrexate. Due to timely diagnosis and management we were able to avoid complications and were able to preserve her fertility.*

Conclusion*: It is important for clinicians and radiologists managing women with risk factors for a scar ectopic pregnancy to maintain a high index of suspicion Failure to diagnose and initiate prompt management may lead to uterine rupture, massive hemorrhage, and maternal death.*

Keywords:*Cesarean scar ectopic pregnancy, Diagnostic challenge, Management*

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Background

Ectopic pregnancy is one of the leading causes of morbidity and mortality among fertile women accounting for 9% of the pregnancies-related deaths[1]. Pregnancy implantation within previous caesarean scar (caesarean scar pregnancy (CSP), is one of the rarest locations for an ectopic pregnancy occurring in approximately 1 in 2000 pregnancies.[1,2] Its incidence is rising in parallel with the increase in number of primary and repeat cesarean sections. With increased index of suspicion and liberal use of transvaginalsonography, more cases of caesarean scar pregnancy are being diagnosed in early pregnancy, thus allowing early interventions and preservation of uterus and fertility.[3]

Case Report

We describe a case of a 34-year-old lady who had history of two previous live births by cesarean sections and one miscarriage at ten weeks gestation for which evacuation was done. She presented with gestational amenorrhea of seven weeks. She was asymptomatic at presentation. Initial ultrasound done showed Caesarean scar twin monochorionic - monoamniotic pregnancy corresponding to six weeks gestation with both alive embryos. BHCG at presentation was 34156. She was admitted for systemic (IM) and local (intrasac instillation under ultrasound guidance) methotrexate after proper counselling about the risk of treatment failure and complications.

Her BHCG levels showed an initial rise as expected up to 41359 recorded after three days of methotrexate before showing a declining trend. She was followed post methotrexate with ultrasound and BHCG level. Her BHCG had reduced to 128 by 2 weeks post injection before becoming negative another 10 days later. Patient was admitted once with severe pain 2 days post methotrexate injection but was managed conservatively

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Figure 1. Ultrasound demonstrating the characteristics of cesarean scar ectopic pregnancy: Thin myometrium between gestational sac and uterine serosa.

Figure 2. Twin Monoamniotic- monochorionic pregnancy

Figure 3. Twin Viable Monoamniotic- monochorionic pregnancy

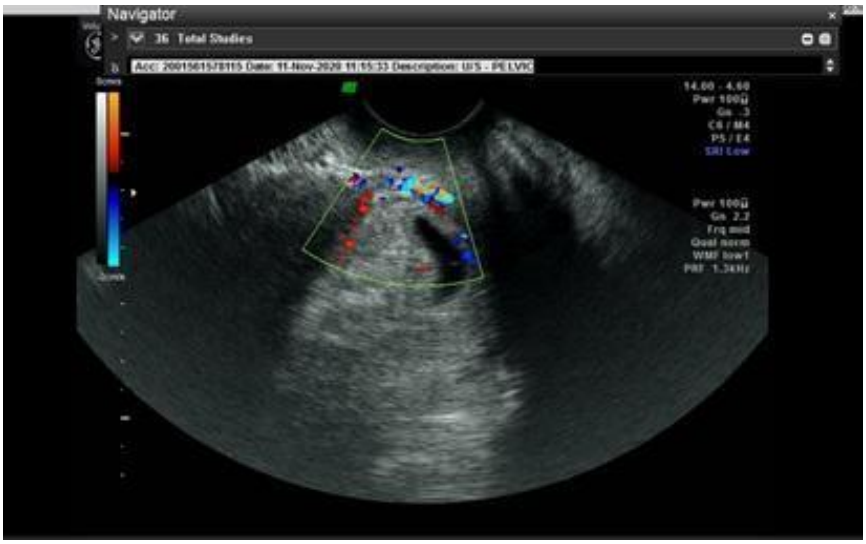

Figure 4 - collapsed sac; 1 week post methotrexate

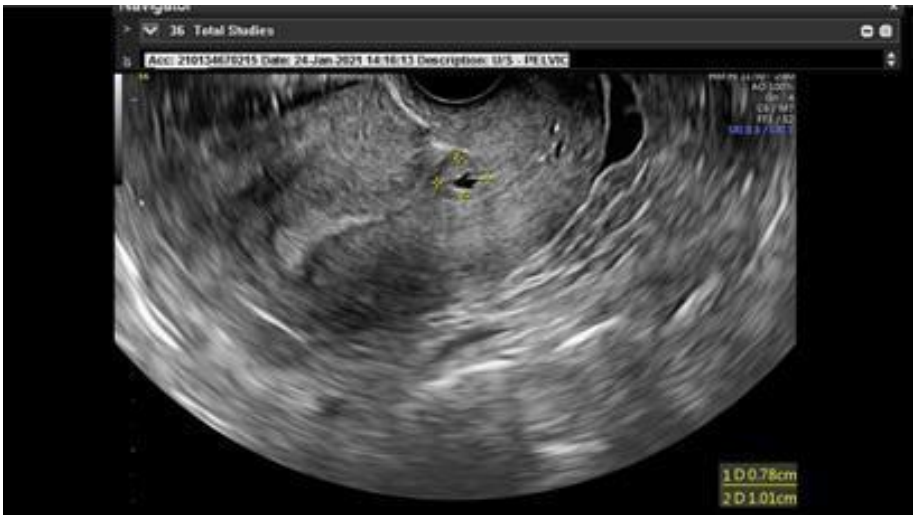

Figure 5 - Two weeks post Methotrexate

Discussion

A Caesarean scar (ectopic) pregnancy occurs when a pregnancy implants on the scar site. It is rarest of all ectopic pregnancies [1]. Incidence estimated in overall caesarean delivery is 1/1800-1/2500 [2]. It is a life threatening condition that can cause excessive haemorrage and there is risk of uterine rupture

Despite more than half of these patients experiencing greater than two cesarean deliveries, the risk for a cesarean scar ectopic does not necessarily increase with the number of cesarean deliveries. Disruption of the endometrium and myometrium after cesarean delivery predisposes to improper implantation at the site of the scar.[4]Without normal surrounding myometrium, untreated cesarean scar ectopic pregnancies can result in uterine rupture with severe maternal hemorrhage and death.

Although the incidence of cesarean scar ectopic pregnancy is uncommon, its incidence is increasing with the rising incidence of cesarean deliveries. As these pregnancies are life-threatening, it is important to identify and treat cesarean scar ectopic pregnancies to avoid significant morbidity and mortality.

The most common clinical presentation of Caesarean ectopic pregnancy is painless vaginal bleeding without any specific clinical signs.[5]For its diagnosis endovaginal ultrasonography and color flow Doppler are very helpful [6].

There are no specific diagnostic criteria for cesarean scar ectopic pregnancies however ultrasound findings should indicate an enlarged lower uterine segment with thin myometrium at the implantation site. Furthermore, the trophoblast must be located between the bladder and anterior uterine wall, fetal parts should ot be located within the uterine cavity, and there should be discontinuity of the anterior uterine wall on a sagittal view. [6] Upon implantation on the uterine scar, cesarean scar ectopic can either extend into the cervico-isthmic space and into the uterine cavity or extend deeper into the myometrium toward ttheserosal surface of the uterus

There should be differentiation of Caesarean scar pregnancy from cervical pregnancy. To differentiate from a cervical pregnancy, in transvaginalsonography no myometrium between the gestational sac and bladder must be seen, because the gestational sac grows into the anterior portion of the isthmus

MRI has important role when sonography is equivocal or inconclusive before therapy or intervention. [6]

Treatment modalities are dependent on the individual case. Women have been managed expectantly, medically with methotrexate, or surgicaly.[5,8]Apart from surgical excision at hysteroscopy or laparoscopy or laparotomy, vacuum aspiration can be used to remove the ectopic scar.The overall success rate of systemic methotrexate (MTX) and/or local injection of MTX or

potassium chloride has been reported to be 62%.[9] *Dilation and curettage (D&C) has been associated with a 28% risk of hemorrhage which dropped to 4% when combined with uterine artery embolization (UAE). Hysteroscopic resection of Cesarean scar pregnancy has been reported to be unsuccessful in 12% of cases. Laparoscopic, vaginal, and open excision and repair of the defect were associated with a high success rate (≥96%) and a low risk of hemorrhage (≤4%)*[9]

Our patient responded very well to a combination of systemic plus local methotrexate despite being at high risk of treatment failure in view of having twin viable pregnancies with initial high BHCG level .
She remained well post treatment and her BHCG dropped gradually over 2 weeks. We were able to avoid surgical procedure for her and avoided any significant morbidity.

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