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FIRST TRIMESTER UTERINE RUPTURE DUE TO SCAR ECTOPIC PREGNANCY

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ABSTRACT (IS NOT STRUCTURED)

Uterine rupture during first trimester of pregnancy is an extremely rare, but life threatening cause of intraperitoneal haemorrhage. Review of literature revealed that all reports of first trimester uterine rupture are related to scar dehiscence following previous caesarean section or occurred in unscarred uteri of multiparous woman. In early pregnancy of approximately 4-5 weeks, vaginal ultrasonography may clearly verify a scar pregnancy, but sonographical diagnostic findings may change with the pregnancy progress. If scar pregnancy diagnosed early complications can be avoidable otherwise woman will be at risk of uterine scar rupture, haemorrhage or even secondary abdominal pregnancy and maternal morbidity and mortality. We present a case of uterine rupture which occurred at nine weeks of gestation and the cause was the previous uterine surgery due to adherent placental polyp at fundus. We postulate our hypothesis, that all first trimester uterine ruptures are caused by scar implantation of the trophoblast.

Key Words: Scar pregnancy, uterine rupture

INTRODUCTION

Scar pregnancy is a rare entity, which refers to a pregnancy implanted into a deficient uterine scar following previous surgery.[1] The incidence is not well known as there are only few cases reports of first trimester scar ectopic pregnancies described in literature.[2] The predisposing factors for scar ectopic pregnancy are previous caesarean section, myomectomy, hysterotomy, any uterine surgery, In vitro fertilization , adenomyosis, previous dilatation and curettage and manual removal of placenta.[3] Clinical presentation can be either hypovolumic shock, severe abdominal pain or painless vaginal bleeding. Doppler ultrasound and hysteroscopy have been used to make a diagnosis.[3] Majority of patients need immediate laparotomy after resuscition but may need conservative approach if diagnosed early.

CASE REPORT

The patient was 26 year old woman G3P2+o admitted in emergency with gestational amenorrhea of 9 week and severe abdominal pain .She had antenatal visit twice and her pregnancy was confirmed by ultrasound. Her past medical and social history was not contributing. Her obstetrical history includes her first pregnancy ended in intrauterine fetal death of 26 weeks, terminated vaginally with manual removal of placenta. She had continuous vaginal bleeding which lasted for 3 months. Ultrasound report showed fibroid uterus for that she had laparotomy and a mass was removed from upper part of uterus and histopathology report revealed placental tissue with ghost chorionic villi calcification and inflammatory infiltrate .She again conceive after 3 months of laparotomy and her pregnancy was uneventful and she delivered an alive fetus at term by elective caesarean section due to breech presentation. On physical examination she looked grossly pale, anxious. Pulse was 110 beats per minute, blood pressure 80/50mmHg. On abdominal examination, abdomen was distended, tender, fluid thrill was positive and on needling

about 10ml of frank blood aspirated. Vaginal examination revealed vulva and vagina smeared with blood, cervical excitation was negative, uterine size could not assessed but fullness felt in both adnexa and in pouch of douglus. Provisional diagnosis of ectopic pregnancy was made and after resuscitation she was shifted in operation theatre for emergency laparotomy. On day of admission her blood was analysed for full blood count, blood urea, creatinine, sugar, coagulation profile and electrolytes. Her haemoglobin was 6 g/dl with other reports were within normal limits. Ultrasound scan of abdomen and pelvis revealed free fluid within peritoneal cavity along with intrauterine 9 weeks gestational sac. On laparotomy abdominal cavity was filled with two litres of blood clots that was sucked. Both tubes and ovaries looked normal but there was rent about 3cm at uterine fundus. Fetus along with membranes were bulging through rent (figure-1) which were removed with sponge holding forcep (figure-2) and rupture was repaired. Three units of blood transfused. Her postoperative recovery was uneventful and patient discharged on 5th postoperative day and advised for follow up.

FIGURE -1:
Scar ectopic leads to fundal rupture from where fetus along with membrane extruding out.



FIGURE -2:
9 weeks fetus delivered through uterine fundal rupture

DISCUSSION

Scar pregnancy is defined as the embedding of gestational sac in previous uterine scar. In 1978, first case of caesarean scar pregnancy was reported by Larsen and Solomon.[4] During the follow up of ten years, only 16 cases were reported in Literature.[5] Same as our case was reported by Gerhard Sliuz.[6]

The exact cause of scar pregnancy is unknown. Several hypothesis have been proposed one is that conceptus enters the myometrium through a microscopic dehiscent tract created through trauma that occurred in association with a caesarean section or any uterine surgery.[7] Same risk factors found in our case. Ultrasonography is a useful tool for diagnosing scar pregnancy. It must be distinguish from other types of abnormally implanted pregnancies including cervical, cervicoisthemic pregnancies because outcome and treatment may differ. Scar pregnancies is different from intrauterine pregnancy with placenta increata and percreata in which more aggressive condition occurs in first trimester because gestational sac embedding in myometrium. Transvaginal ultrasound and Magnetic Resonance Imaging (MRI) can diagnose the scar pregnancy earlier and more conservative approach can use.

There are no universal guidelines for scar pregnancy, owing to its rarity. As our patient was haemodynamically unstable so laparotomy was performed and rupture site sutured. Expectant management did not seem to being appropriate choice as there was a great risk of scar rupture and subsequent emergency hysterectomy. Conservative management of these pregnancies under stable condition includes amniotic aspiration with local administration of 8 mmol of potassium Chloride (KCL) or 25 mg of methotrexate (MTX) into a sac and surrounding myometrium has been shown to be associated with 70-80% success rate.[8] and treatment with hypertonic glucose injected into ectopic sac using direct ultrasound needle guidance with treatment supported by local MTX or systemic methotrexate followed by suction evacuation is another option .As of now MTX is the best treatment method if there is no contraindications for patients who desire to preserve fertility. Dehiscence was detected in some cases after successful medical treatment and repeat scar pregnancy has been reported after local methotrexate.[9] Surgical management with suction curettage under ultrasound guidance followed by balloon tamponade is successful in reducing heavy intraoperative bleeding Uterine artery embolization can also used to reduce haemorrhage. An alternative approach can be use of Shirodkar suture prior to suction evacuation, with approximately 79% reduce the risk of bleeding.[10] Lee at al reported laparoscopic resection of scar Pregnancy.[3] Finally surgical treatment offers the opportunity to remove the gestational sac and repair of defect as done in our case or laparotomy followed by hysterectomy is only option in case of hypovolumic shock, no treatment modilities can guarantee for uterine integrity.[9]

CONCLUSION

All scar pregnancies should be reported so that more data may be obtained to quantify the indications, the safety and efficacy of various management modilities. At the movement, due to the relative rarity of scar pregnancy, it is still unclear which treatment is most optimal.

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