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Case Report

Caesarean scar ectopic pregnancy: a rare case report

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ABSTRACT

Caesarean scar ectopic is one of the rarest among all ectopic pregnancies. It is defined as a blastocyst implantation on a previous caesarean scar. The incidence of caesarean scar ectopic has increased due to rise in number of caesarean deliveries. Early diagnosis by using ultrasonography and prompt management improves the outcome by allowing preservation of future fertility. It is very important because any delay can lead to increased maternal morbidity and mortality. We are reporting a rare case of gravida3 para1 live1 abortion1 with previous one caesarean delivery, diagnosed as caesarean scar ectopic pregnancy with the help of ultrasonography. Patient underwent uterine artery embolization (UAE) after failed medical management followed by hysteroscopy and ultrasound guided dilatation and evacuation, and on histopathology examination caesarean scar pregnancy was confirmed.

Keywords: Caesarean scar ectopic pregnancy, Caesarean section, Uterine artery embolization

INTRODUCTION

It is a life-threatening form of abnormal pregnancy implanted within the uterine myometrium at the site of a healed caesarean scar.[1] Historically, caesarean scar ectopic pregnancy (CSP) has been an extremely rare occurrence.[2] With increasing caesarean deliveries, incidence has been slowly increasing with estimations to be up to 1:500 pregnancies. It is thought to be the precursor of placenta accreta spectrum (PAS).[3] Disruption of the endometrium and myometrium after caesarean delivery predisposes to improper implantation at the site of the prior hysterotomy.[4] 40 percent of the women are asymptomatic and the diagnosis is made during routine sonographic examination.[5] Symptomatic caesarean scar pregnancy usually presents early with pain and bleeding. Prompt diagnosis is required to reduce the risk of rupture, hemorrhage and PAS.[6] Magnetic resonance imaging (MRI) has important role when sonography is equivocal or inconclusive before the therapy or intervention.[7] Management of CSP can be expectant, medical or surgical. The surgical approach provides optimal results but depends on local expertise.[8]

CASE REPORT

Case report of a 31-years-old women who was G3P1L1A1 with 8weeks POG presented to Ramaiah Hospitals OPD with complaints of pain abdomen and bleed PV since 1day. Her past obstetric history revealed one previous lower segment caesarean section due to fetal distress 2.5 years back and one missed abortion at 2 months medically managed one year back. Mother was hemodynamically stable. Systemic examination was normal. On per-abdomen examination, Pfannenstiel scar noted, which was non tender. Abdomen was soft, no guarding/rigidity. Per-speculum minimal spotting noted. Per-vaginal examination, uterus was bulky retroverted bilateral fornices free non tender. Patient was admitted and on investigation, routine blood and urine investigations were normal. On ultrasound examination, single live intrauterine gestation of 7 weeks 4 days in the eccentric lower uterine segment close to internal os and implantation on previous caesarean scar site with cardiac activity of 163 bpm, bilateral adenexa normal, with an impression of CSP was noted. The serum beta hCG level was 99,270 IU/l on admission. Single dose injection methotrexate 50 mg IM and tablet mifepristone 200 mg was given on day of

admission. Injection Folinic acid was given next day. Serial serum beta hCG level monitoring done on day 4 and day 7 was found to be 88,910 IU/l and 1,17,700 IU/l respectively in the rising trend with persistent cardiac activity on ultrasound suggesting failed medical management. There by it was decided to proceed further with surgical management. She underwent preoperative bilateral uterine artery embolization (UAE) followed by diagnostic hysteroscopy and ultrasound guided dilatation and evacuation. Procedure was uneventful with minimal blood loss. Tissue was sent for histopathological examination and diagnosis of Caesarean scar ectopic pregnancy with degenerative products of conception was confirmed. She was successfully managed and discharged on post-operative day 2. Patient was followed up in OPD with serum beta hCG level, until it was non-pregnant level.

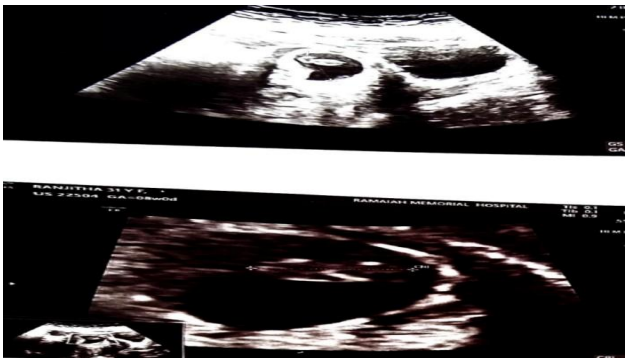

Figure 1: Ultrasound image of cesarean scar preganacy.

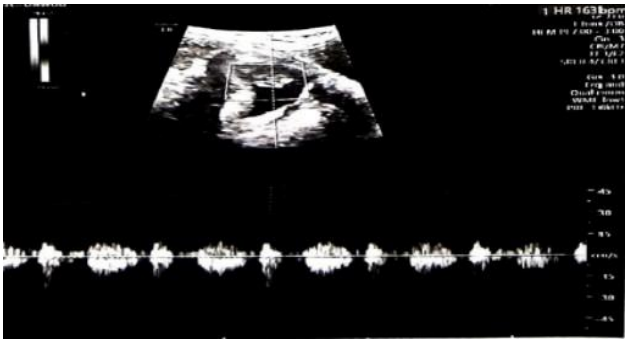

Figure 2: Ultrasound image of cesarean scar preganacy with presence of cardiac activity.

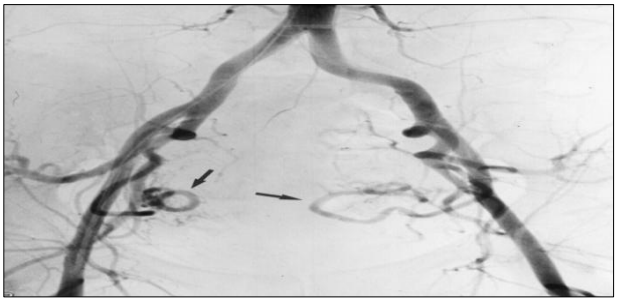

Figure 3: Intraoperative arteriography of bilateral uterine artery embolization.

DISCUSSION

A caesarean scar ectopic pregnancy occurs when implantation of pregnancy occurs on a caesarean scar.[1] It is rarest among all the ectopic pregnancies.[2] Incidence estimated in overall caesarean delivery is 1/1800-1/2500.[9]

It is life threatening condition, causing risk of uterine rupture and excessive hemorrhage. The diagnosis of ectopic pregnancy is difficult with increasing false negative diagnosis of cervical pregnancy or low implantation leading to delay in identification and failed timely management causing major complications.[10]

The pregnancies with previous caesarean section have increased the risk of placenta previa, placental abruption, placenta accreta, percreta, together called as PAS as well as ectopic pregnancies in future.[3] There are various theories which explain the etiology and mechanism of caesarean scar ectopic pregnancy, the most accepted one is blastocyst invade into the myometrium through a microscopic dehiscent tract, which may be due to previous uterine surgery like caesarean section, and manual removal of placenta. As per another theory in absence of previous uterine surgery, caesarean ectopic pregnancy can occur due to trauma done in assisted reproduction techniques.[4] Painless vaginal bleeding without any specific clinical signs is one of the most common clinical presentation of caesarean ectopic pregnancy.[5]

For its diagnosis ultrasonography and color Doppler are very helpful. MRI has important role when ultrasonography is inconclusive before treatment or intervention. Differentiation of caesarean scar pregnancy from cervical pregnancy should be made before initiation of therapy. To differentiate CSP from a cervical pregnancy on ultrasonography, myometrium should not be seen between the gestational sac and bladder, because the gestational sac grows into the anterior portion of the isthmus formed by previous weak caesarean scar. To diagnose SCP on USG, sagittal plane can be used to indicate an empty cervical canal, gestational sac on previous caesarean scar with clear uterine cavity. It is possible to assess uterine scar integrity in a non-pregnant post-caesarean section female by using trans-vaginal USG and saline infusion sonography. This defect can be identified by the presence of fluid within the incision site or filling defect at the presumed site of the scar.[9]

In our study, medical management with methotrexate and mifepristone was tried first. On monitoring serial serum beta HCG rising trend was noted with persistent cardiac activity on ultrasound, suggesting failed medical management after which patient was managed surgically. In a study conducted by Rizk et al of the 26 patient with CSP, 19 of them successfully managed by medical method.[11] They were treated with intramuscular and intragestational methotrexate with successful outcome. After the treatment, typically, there was increase in the serum beta hCG concentrations as well as the volume of

the gestational sac and vascularization in initial phase. After a variable time period the values of serum beta hCG decreased, as expected.

The availability of UAE in our hospital has contributed to successful management without any haemorrhage during the hysteroscopy and ultrasound guided dilatation and evacuation. Various case reports of patients with caesarean scar ectopic pregnancy, supports surgical option as the main stream management. This includes elective laparotomy and excision of the gestational mass along with resection of old scar as per Deepika et al study.[7] Due to resection of the old scar, with a new uterine closure and a shorter follow-up period, surgery is considered as best treatment modality for caesarean scar ectopic pregnancy. When surgical management is combined with preoperative UAE as in our study, it leads to significant reduction in blood loss and reduces the mortality and morbidity caused by CSP.

CONCLUSION

Combined UAE–hysteroscopic and USG guided dilatation and evacuation appears to offer a safe, effective and minimally invasive surgical treatment for CSP with optimal recovery time, with short operating time and reduced hospital stay. Uterine artery embolization should be considered preliminary in management of CSE as it results in significantly less blood loss and promising results of any surgical procedure. One limitation of our study could be the risk of recurrent CSP, as the isthmocele was not excised. Further studies with a larger sample of patients are required to standardize this novel approach of UAE followed by hysteroscopy and ultrasound guided dilatation and evacuation.

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