



Case Report

Cesarean Scar Ectopic Pregnancy in Second Trimester A Case Report

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Abstract

Cesarean scar ectopic pregnancy (CSEP) is one of the rarest form of ectopic pregnancy. It is characterized by a gestation implanted in a caesarean section scar and surrounded by the myometrium and the fibrous tissue of the scar. With rising cesarean delivery rates and widespread use of ultrasound in early pregnancy, there is a parallel upward trend in the incidence of CSEP. The most significant risk associated with a CSEP is an early uterine rupture with life threatening maternal hemorrhage leading to hysterectomy and loss of reproductive potential. An early diagnosis can offer conservative treatment options capable of preserving the uterus. Here we present a case 25-year-old G-3, P2(both LSCS - lower segment cesarean section), admitted at her 17 weeks of pregnancy with per vaginal spotting and diagnosed as a case of missed abortion. All her vitals were normal. Three days after her admission she was diagnosed with cesarean scar ectopic pregnancy and managed by laparotomy followed by total abdominal hysterectomy.

Introduction

The high rate of cesarean delivery in Bangladesh is well documented. According to the report of Bangladesh Maternal mortality and health care survey 2016 the rate now stands at 31%, which implies that almost one-in-every-three births in a health facility is delivered by cesarean section.

Cesarean delivery is associated with higher morbidity and mortality compared to vaginal delivery, including both well known complications in subsequent pregnancies, such as adherent

placenta and uterine rupture¹; And less well known complications such as CSEP.

CSEP is defined by a gestation implanted in a scar of previous cesarean section². Exact incidence is unclear but it is estimated that one in two thousand pregnancies and 6% of ectopic pregnancies among woman with prior cesarean delivery³.

Diagnosis is made by ultrasonography, a gestational sac at the site of scar of previous cesarean delivery and presence of empty upper uterine cavity and cervix as well as thin myometrium adjacent to bladder³.

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Case Report

A 25-year-old, Gravida-3, Para-2 (both LSCS) was admitted at about seventeen weeks of pregnancy with a history of per vaginal spotting and lower abdominal pain for two days. On admission, all her vitals were within normal range.

Abdominal examination revealed eighteen weeks size pregnant uterus and mild tenderness in lower abdomen. Per vaginal findings were - closed internal os, blackish discharge coming through the external os.

Ultrasonography was done for pregnancy profile after admission, which showed gravid uterus containing a demised fetus. A large mixed echogenic area with cystic change is seen in the body and cervix of uterus, encircling the dead fetus.

Her serum hCG level was 260.5mIU/ml.

Tab misoprostol 400µgm through buccal route in every four hours started to initiate expulsion process (medical management of missed abortion). Forty eight hours elapsed with no change in cervical status, but patient developed increased lower abdominal pain, uterine irritability. TVS done immediately again and found uterus is gravid containing demised fetus. A large mixed echogenic area with cystic changes is found in the body and cervix of the uterus encircling the dead fetus,

involving the myometrium, measuring about 120x98 mm. Adjacent myometrium is thinned out & ill defined and decision for immediate laparotomy was taken. Urologist and general surgeon were asked to be present incase of urinary bladder invasion requires their expertise.

Anesthesiologist was notified about the seriousness about the situation and arrangements for blood and blood products was made.

After laparotomy, the bladder was found adherent to the lower uterine segment which was actual deficient. While dissecting bladder from lower uterine segment, bladder wall opened up and previous uterine scar was found dehiscient. Fetus was extracted out first through the gap in the previous scar and placenta was then clearly seen to be firmly adherent to the myometrium of the lower part of the uterus at the previous scar. Part of the placenta removed by piecemeal and torrential bleeding started. So without delay, total hysterectomy was done and urologist repaired the bladder wall injury. Estimated blood loss was about one and a half liter. Two units of whole fresh blood were transfused during operation and two units in post-operative period. Urinary catheter was kept in situ for twenty one days. Postoperative period was otherwise uneventful.

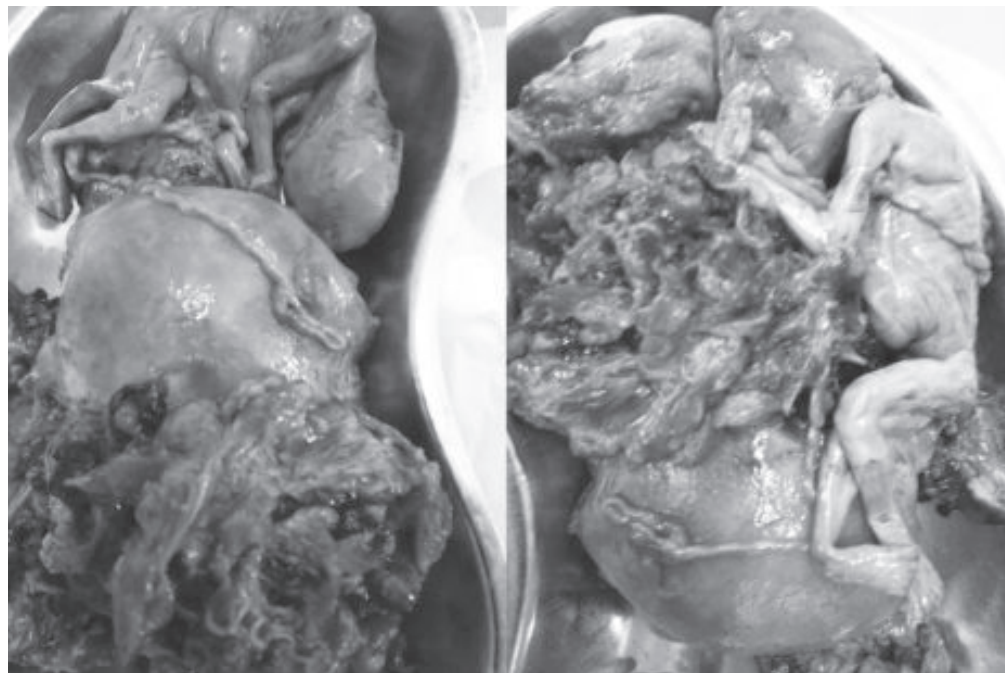


Fig.-1: Specimen of demised fetus with 18 weeks size uterus, body of uterus and cervix is intact. Fetus and placental tissue extracted from previous cesarean scar area.

Histopathology report was consistent with a cesarean scar ectopic pregnancy with placenta accreta. Patient was discharged on her 4th postoperative day. Healing was well at her two weeks post-operative check-up.

Discussion

Cesarean scar ectopic pregnancy is the rarest form of ectopic pregnancy. It constitutes a life threatening condition.⁴ However with the rising rate of cesarean deliveries all over the world, probably its incidence would increase. CSEP is uncommonly diagnosed in the second trimester. Thus, it is important to have a high index of suspicion in patients with risk factors.

Scar pregnancy is difficult to differentiate from a cervical pregnancy. Cervical pregnancy rarely progress to term, whereas scar pregnancy may do so because of their position at the level of internal os.⁵ Diagnosis of caesarean scar pregnancy is usually made on USG, which shows empty uterine cavity and empty cervical canal gestational sac in the anterior part of uterus and absence of healthy myometrium between the bladder and the sac.⁶

Diagnosis should be based on pregnant patient's history and clinical manifestation such as abdominal pain and any amount of bleeding, ranging from spotting to a life threatening hemorrhage. The most important evidence, however, is based on sonographic and Doppler flow findings.⁷

The management of CSP is highly variable. Management options in first trimester may vary between service providers. Due to small gestational sac and fetus, it is also less challenging to manage CSP in first trimester than second trimester. Past approaches include systemic and local injection with methotrexate, local potassium chloride injection, hysterectomy, dilatation and curettage open or laparoscopic scar resection, aspiration, embolization and hysteroscopy. These options may successfully documented in first trimester but have not been explored in second trimester of pregnancy⁸.

Dilatation & curettage should not be considered as first therapy⁹. Because majority of villi are implanted in myometrium and it seems very unlikely that gestational sac could be expelled by

curettage without perforating uterine wall causing life threatening bleeding and requiring emergency laparotomy.⁹ The surgical approach is supported by others.^{4,9} These include, elective laparotomy and wedge excision of gestational mass.

Our patient posed many challenges due to her late presentation and diagnosis. She had a high risk of maternal morbidity including severe hemorrhage and early uterine rupture. Laparoscopic procedure was not possible due to lack of expertise and suspicion of uterine rupture, as misdiagnosed earlier as missed abortion. Due to failure of medical management of missed abortion, reevaluation by TVS made the diagnosis of CSP.

Our case emphasizes the importance of early diagnosis to facilitate early treatment. Our approach was to manage the case involving laparotomy followed by total hysterectomy. As minimal invasive surgery is associated with reduced surgical morbidity and earlier recovery compared to an open procedure which was not possible for our case. It would be possible if diagnosed earlier in the first trimester with lowest risk for the patient.

Additional research and guidelines are needed for this pathology which is expected to become more common due to rise of cesarean deliveries.

Conclusion

As cesarean section rate as well as cesarean scar ectopic pregnancy rate is increasing, early diagnosis and treatment is necessary. High resolution TVS and its increasing use in early pregnancy has resulted in early and more frequent diagnosis of this condition. Commonly CSP presents as threatened abortion or incomplete or complete abortion in first trimester. Sometimes pregnancy may progress to the second or third trimester and may develop into placenta praevia / percreta. So, evidence based guidelines to manage such cases are mandatory.

Multidisciplinary approach may often be needed. Minimal invasive surgery or medical management should be justified. Early diagnosis and judicious management approach are vital to reduce maternal morbidity.

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