

Case Reports

Scar Ectopic: Diagnostic and Management Challenge

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Abstract:

Scar ectopic pregnancy is the rarest form of ectopic pregnancy and has been increasingly diagnosed all over the world. Usually when a blastocyst implants on the fibrous tissue of the previous Caesarean scar is called scar ectopic. This type of abnormal implantation of embryo can occur following hysterotomy, dilatation and curettage, abnormal placentation surgery on uterus like myomectomy, hysteroscopy and manual removal of placenta.¹ The incidence is increased due to increase in number of Caesarean deliveries. Trans vaginal Sonography helps in early diagnosis. Early diagnosis leads to prompt management and improves the outcome by allowing preservation of future fertility. Excision of trophoblastic tissues using laparotomy or laparoscopy, systemically administered methotrexate, and more recently uterine artery embolization are the treatment options for scar ectopic. When TVS is inconclusive, MRI can be recommended.

We are reporting here a case of first trimester caesarean scar pregnancy with viable fetus in the process of rupture, where uterine repair could be done to preserve the future fertility.

Keywords: Scar rupture, Haemorrhage, Pregnancy mass

Introduction:

In caesarean scar ectopic occur when implantation occur in the myometrial defect in the previous uterine incision. Vial et al proposed that there are two different kinds of caesarean scar ectopic pregnancies one that group inside into the uterine cavity as gestational sac develops and has the potential to reach viable gestation but with risk of placenta praevia and major obstetric haemorrhage.² The other type is exogenous, which grows outward toward the urinary bladder with potential for scar rupture and intraabdominal bleeding. Early detection is of utmost importance to decrease the complications associated with it.³ The most common sign is early pregnancy vaginal bleeding, although presentation may be variable. Ectopic pregnancy is one of the highest contributor to hemorrhage-related deaths⁴. Risk factors for an ectopic pregnancy include a prior extrauterine pregnancy, use of assisted reproductive technology, history of tubal ligation, increased maternal age, intrauterine device placement, and active sexually transmitted infection. Despite

these known risk factors, however, many women may present without any of these characteristics.

The most common location for an ectopic pregnancy is in the ampulla of the fallopian tube. But an ectopic pregnancy can occur in a variety of anatomic locations including the myometrium, cervix, ovaries, and abdomen. Usually Caesarean scar pregnancies are rare, occurring in approximately 1 in 2000 pregnancies, although the incidence is increasing⁵. The increasing rate of cesarean scar ectopic pregnancies reflects the increasing rate of cesarean delivery and common all over the globe. Despite more than half of these patients experiencing greater than 2 cesarean deliveries, the risk for a caesarean scar ectopic does not necessarily increase with the number of cesarean deliveries. Shen et al in their series of 45 patients with caesarean scar ectopic pregnancies in which 42 woman(93.3%) had undergone only one caesarean section, concluded that multiple caesarean section may not increase the risk of this condition.⁶ Disruption of the endometrium and

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myometrium after cesarean delivery predisposes to improper implantation at the site of the prior hysterotomy. Without normal surrounding myometrium, untreated cesarean scar ectopic pregnancies can result in uterine rupture with severe maternal hemorrhage and death.

Case Summary:

A 23 years old lady presented OPD of a tertiary care hospital with pregnancy for 9 weeks associated with severe abdominal pain for 4 days. She had burning sensation during micturition and also pain during defaecation. She had a history of 2 caesarean section due to prolonged labour in her first pregnancy and another subsequent elective caesarean delivery at 37 weeks. She is a regular menstruating woman. Her LMP was 10.5.22. Her TVS report revealed that 9 weeks intrauterine pregnancy with mixed echogenic mass in right adnexal region suspected ruptured ectopic pregnancy with moderate pelvic collection.

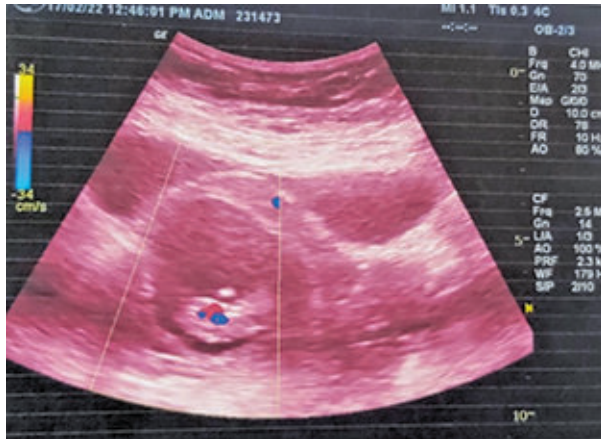


Fig.-1: USG showing live intrauterine pregnancy along previous caesarean scar.

On admission, her vitals were within normal limit and stable. On examination, severe tenderness present in right iliac fossa, hypogastric and umbilical region. On per vaginal examination – PV bleeding scanty and cervical excitation test was positive. Hb% was 6.8 gm/dl. So decision was taken for laparoscopy. After making pneumoperitoneum inserting telescope, huge amount of clotted blood and fresh blood was found in abdominal cavity. Clotted blood was sucked out. Both fallopian tubes and ovaries were healthy found. But there was an area of discontinuation of scar found along the previous scar on the uterus and bleeding was present.

Then decision was changed and consulted for laparotomy. After opening the abdominal cavity, uterus was found ruptured along previous scar. Gestational

sac containing fetus was found just outside of uterus attached on the scar which was taken out and followed by gentle curettage was done through the opening. Repair of uterus was done. After Peritoneal toileting and securing haemostasis, abdomen was closed in layers. Four units of blood was given during and after operation. Her post operative period was uneventful and she was discharged with advice after improvement on 3rd post operative day.

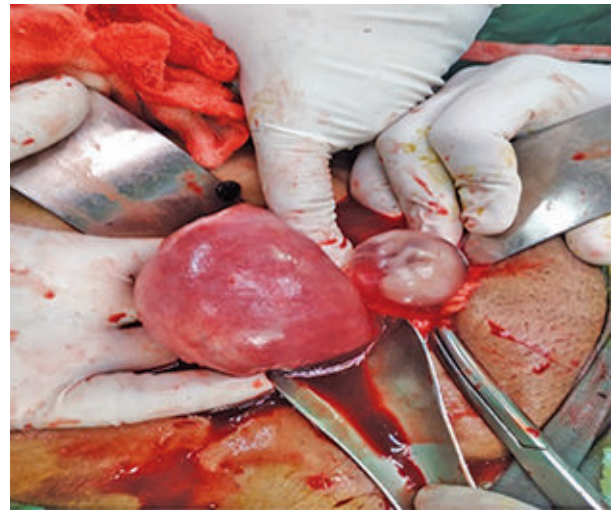


Fig.-2: Picture showing scar ectopic with living embryo.

Discussion:

A Caesarean scar (ectopic) pregnancy occurs when a pregnancy implants on a Caesarean scar. It is a life threatening condition, causes excessive haemorrhage and risk of uterine rupture. The diagnosis of this type of ectopic pregnancy is very difficult and false negative diagnosis can lead to major complications.

The pregnancies with previous caesarean section have increased the risk of placenta praevia, placenta accreta, percreta as well as ectopic pregnancies in future. There are various theories which explain the etiology and mechanism of Caesarean ectopic pregnancy, the most accepted one is blastocyst invades into the myometrium through a microscopic dehiscence tract, which may be due to previous uterine surgery like Caesarean section, manual removal of placenta etc.⁵ As per another theory in absence of previous uterine surgery, Caesarean ectopic pregnancy can occur due to trauma done in assisted reproduction techniques.⁶

The most common clinical presentation of Caesarean scar ectopic pregnancy is painless vaginal bleeding without any specific clinical signs. For its diagnosis endovaginal ultrasonography and color flow Doppler are very helpful^{7,8}. MRI has important role when sonography is equivocal or inconclusive before therapy

or intervention. There should be differentiation of Caesarean scar pregnancy from cervical pregnancy. To differentiate from a cervical pregnancy, in transvaginal sonography no myometrium between the gestational sac and bladder must be seen, because the gestational sac grows into the anterior portion of the isthmus⁹. To determine whether a Cesarean Scar Pregnancy (CSP) has occurred, USG in the sagittal position can be used to indicate a clear uterine cavity and an empty cervical canal.¹⁰

With the use of transvaginal sonography and saline infusion sonography, even in nonpregnant female it is possible to assess post caesarean section uterine wall integrity. Caesarean section scar defect is identified by the presence of fluid within the incision site or filling defect at the presumed site of the scar⁸.

A study of 26 patient, out of which suspected 19 Caesarean ectopic pregnancies was treated with intra muscular and intragestational methotrexate given with successful outcome¹⁰. After the treatment, there was an initial increase in the human chorionic gonadotropin serum concentrations as well as in the volume of the gestational sac and their vascularization. After a variable time period the values of serum human chorionic gonadotropin decreased, as expected¹⁰.

Various case reports of patients with Caesarean scar ectopic pregnancy even in the absence of bleeding, supports our management as the surgical option⁶. This includes elective laparotomy and excision of the gestational mass. The benefit of surgery is less recurrence because of the resection of the old scar, with a new uterine closure. Other is a shorter follow-up period^{3,8}. In another study with Caesarean scar pregnancy cases, surgical excision of scar is considered as a key management and helpful to prevent recurrence⁹.

The availability of Uterine Artery Embolization (UAE) in cases of Caesarean ectopic pregnancies treated has contributed to successful management without any haemorrhage¹¹

Conclusion:

Resection of pregnancy mass with proper suturing of ruptured caesarean scar could conserve the uterus which will preserve future fertility.

References:

1. Palel M.A. Scar Ectopic pregnancy .J Obstet Gynaecol India 2015 Dec; 65(6):372-5
2. Vial Y, Petighat P, Hohlfeld P. Pregnancy in a Caesarean scar .Ultrasound Obstet Gynecol 2000; 16: 592-593
3. Maymon R, Halperin R, Mendlovic S, Schneider D, Herman A. Ectopic pregnancies in a Caesarean scar: review of the medical approach to an iatrogenic complication. Hum Reprod Update. 2004;10:515–23.
4. Herman A, Weinraub Z, Avrech O, Maymon R, Ron-El R, Bukovsky Y. Follow up and outcome of isthmic pregnancy located in a previous caesarean section scar. British Journal of Obstetrics and Gynaecology. 1995;102(10):839–41.
5. Seow KM, Hwang JL, Tsai YL, Huang LW, Lin YH, Hsieh BC. Subsequent pregnancy outcome after conservative treatment of a previous Caesarean scar pregnancy. Acta Obstetrica et Gynecologica Scandinavica. 2004;83(12):1167–72.
6. Shen L, Tan A, Zhu H, Guo C, Liu D, Huang W. Bilateral uterine artery chemoembolization with methotrexate for cesarean scar pregnancy. Am J Obstet Gynecol. 2012 Nov;207(5):386.e1-6.
7. Cignini P, Giorlandino M, Caserta L, Dominici L, Giorlandino C. The importance of early diagnosis in Caesarean scar pregnancy. J Prenat Med. 2007;1(2):29–31.
8. Aich R, Solanki N, Kakadiya K, Bansal A, Joshi M, Nawale A. Ectopic Pregnancy in caesarean section scar: A case report. Radiology Case Reports. 2015;10 (4):68–71.
9. Fylstra DL, Pound-Chang T, Miller MG, Cooper A, Miller KM. Ectopic pregnancy within a Caesarean delivery scar: a case report. American Journal of Obstetrics and Gynecology. 2002;187(2):302–04.
10. Jurkovic D, Hillaby K, Woelfer B, Lawrence A, Salim R, Elson CJ. First-trimester diagnosis and management of pregnancies implanted into the lower uterine segment Caesarean section scar. Ultrasound in Obstetrics and Gynecology. 2003;21(3):220–27.
11. Rizk B, Holiday CP, Owens S, Abuzeid M. Cervical and caesarean scar ectopic pregnancies: diagnosis and management. Middle East Fertility Society Journal. 2013;18(2):67–73.