

CASE REPORT

CAESAREAN SCAR ECTOPIC PREGNANCY- A CASE SERIES

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ABSTRACT

Caesarean Scar Pregnancy (CSP) is a rare condition, yet its incidence is increasing owing to a rise in caesarean deliveries. It is associated with complications like uterine rupture, maternal hemorrhage, hemodynamic instability and ultimately increased maternal morbidity and mortality. Here we present a case series of 3 patients with CSP. Prompt diagnosis and intervention are imperative in preventing morbidity and improving outcome.

Keywords: Caesarean Scar Ectopic Pregnancy, Obstetrics, Ectopic pregnancy

INTRODUCTION

An ectopic pregnancy is a pregnancy that occurs outside the uterine cavity^{1, 2,3,4}. A prevalence rate of 1/2000 makes Caesarean Scar Ectopic Pregnancies very rare, accounting for 6% of ectopic pregnancies⁵. The most accepted theory is blastocyst invade into the myometrium through a microscopic dehiscence tract, which may be due to previous uterine surgery like Caesarean section, manual removal of placenta etc⁶. There is a variety of treatment modalities used, with varying success rates because of a lack of consensus on mode of treatment and follow up⁷. We present a case series including a case of failed medical management leading to surgery and other two of primary surgical management.

CASE 1

A 26 year old G2P1001 presented to us with vaginal bleeding and pain abdomen since 45 days. She had a history of Caesarean Delivery 4 years prior to presentation. There was no other significant medical history, she had regular menses, no history of sexually transmitted infections. She had a positive urine pregnancy test done 45 days prior to presentation. She received tablet Misoprostol in view of retained products of conception diagnosed in an

ultrasound at another health facility, which was followed up by a surgical evacuation. Vaginal bleeding and abdominal pain did not subside, which led her to our outpatient department (OPD). Her vitals were stable and within normal limits, while the physical examination revealed minimum bleeding through cervix on per speculum examination with a bulky uterus on per vaginum examination. Beta HCG was 29427.1 mIU/mL. A transvaginal ultrasound revealed a single live intrauterine pregnancy in the lower uterine segment measuring 3.5x3cm. Magnetic Resonance Imaging (MRI) showed a possibility of either molar pregnancy or CSP. Medical management was planned and she received injection Methotrexate with serial Beta- HCG follow up. A repeat ultrasound on day seven after injection showed the size of sac 3.9x3cm (Fig 1).

Fig 1 TVS-Heterogenously hyperechoic mass 3.5×3 cm in caesarean scar towards right side with increased vascularity



Owing to the increased size of the pregnancy a decision was taken in favour of exploratory laparotomy. A wedge resection of a 4x6cm bluish mass bulging towards right side of a thinned out lower uterine segment was done along with myometrium which was followed by a repair of uterus (Fig 2,3).

Fig 2-Intraoperative-Bluish mass 4×6 cm bulging towards right side with thinned out caesarean scar with serosa intact suggestive of ectopic pregnancy with scar dehiscence

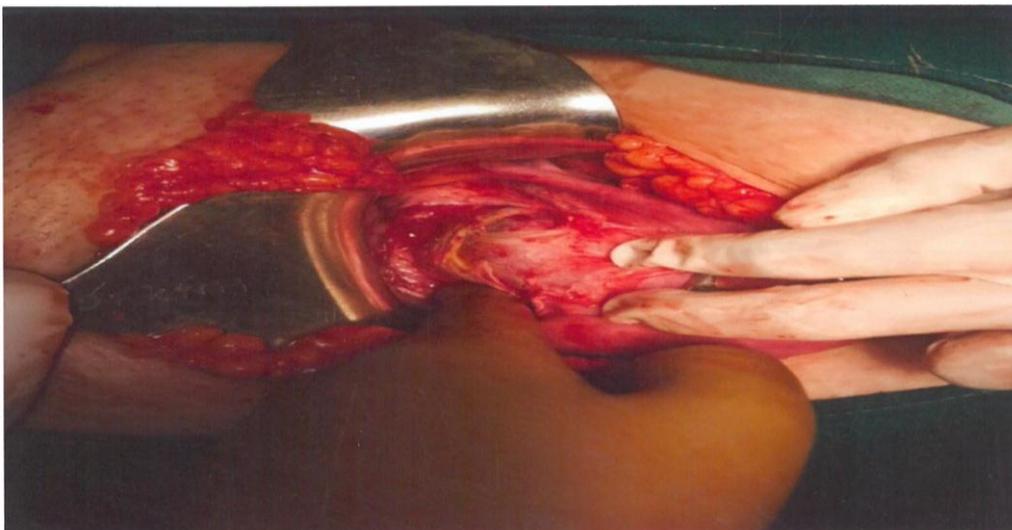
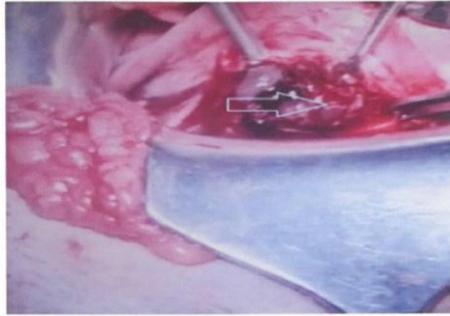
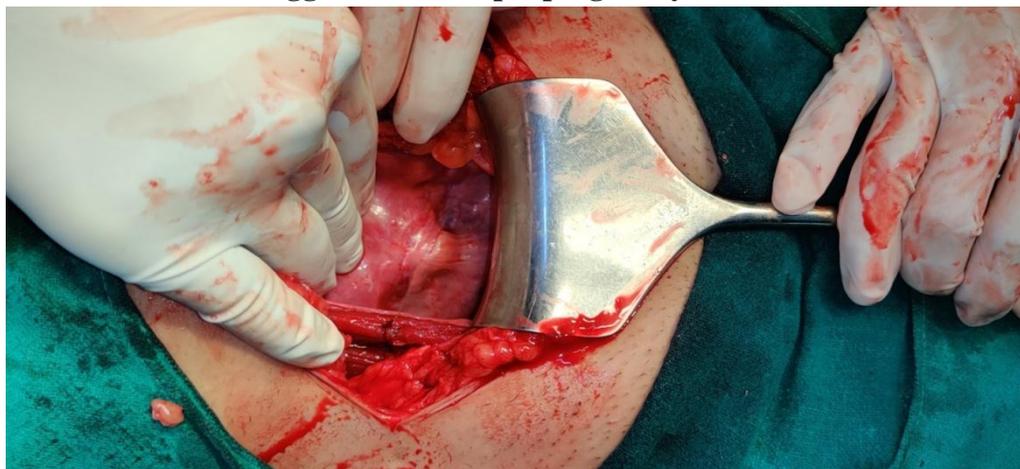


Fig 3 –Intraop-4×6 cm mass at caesarean scar with placental bits and few vesicles

Histopathological examination confirmed a diagnosis of partial hydatidiform mole in Caesarean Scar ectopic Pregnancy.

CASE 2

A 30 year old G4P1021 presented to us with complaint of pain lower abdomen since 2-3 days. She was overdue in her periods by three days. The patient had a Caesarean Section done 5 years prior followed by 2 missed abortions one of which was managed conservatively while the other required suction and evacuation. There was no other significant medical history. A urine pregnancy test was done which came out to be positive. Her vitals were within normal limits and physical examination was unremarkable. Routine antenatal investigations were advised and an ultrasound scan revealed a CSP of size corresponding to 6 weeks 1 day period of gestation. Beta- HCG was 14824 mIU/mL. A decision was taken in favor of exploratory laparotomy. A hysterotomy followed by excision of caesarean scar ectopic sac was done. Intraoperatively a 2x2cm sac was found bulging from the previous caesarean scar in the lower uterine segment with adhesions at the base of urinary bladder (Fig 4,5).

Fig 4-Intraoperative-Bluish mass 2x2 cm bulging from Previous Caesarean scar with adhesions to base of bladder suggestive of ectopic pregnancy with scar dehiscence**Fig 5-Intraoperative-excision of the caesarean scar ectopic sac being done**



A histopathological examination revealed histologic features consistent with ectopic pregnancy gestational sac, thus confirming the diagnosis of a Caesarean Scar ectopic Pregnancy.

CASE 3

A 33 year old G2P1001 came to the antenatal clinic with complaint of brownish discharge per vaginum since 3 weeks. She gave a history of passage of clots per vaginum at 1 day overdue which was followed by brownish discharge per vaginum a week later. She had done a UPT to confirm pregnancy at home. The discharge continued till the day she decided to get evaluated in our hospital. The gestation was 7 weeks 2 days by LMP. She had a Caesarean Section done 5 years prior in view of fetal distress. No other significant medical history was found. A per speculum examination revealed the presence of blood stained discharge while the os was closed. Her vitals were within normal limits. An ultrasound revealed a viable CSP with CRL corresponding to 7 weeks 1 day. A pseudo gestational sac was present in the uterine cavity. An exploratory laparotomy was planned in emergency and a hysterotomy followed by excision of caesarean scar ectopic sac was done. Intraoperatively a bulging mass was seen on previous scar site with adhesions with the bladder which was advanced for which adhesiolysis was done. The diagnosis was confirmed on histopathological examination of the specimen.

DISCUSSION

CSP was first reported in 1978 when a misdiagnosis of incomplete abortion led to severe hemorrhage⁸. The incidence has since been ever increasing. Although its rare, the diagnosis should be suspected in patients with risk factors, since the risk of maternal hemorrhage and uterine rupture is high. Besides the blastocyst invasion theory, another theory attributes the etiology to trauma during assisted reproduction techniques⁹. Although the most common clinical presentation is painless vaginal bleeding, our patients did give a history of pain abdomen. Transvaginal ultrasonography and colour flow doppler are helpful in making the diagnosis^{10,11}. Diagnostic criteria includes a gestational sac located anteriorly at the level of internal os within a visible myometrial defect and a functional trophoblast demonstrated on colour flow doppler¹⁰. MRI can be done in case of an inconclusive ultrasonographic report or

before intervention. The number of prior Caesarean deliveries do not appear to be a significant independent risk factor^{12,13}. Methotrexate has traditionally been reserved for the management of ectopic pregnancies with a Beta-HCG value less than 5000 mIU/mL¹⁴. Expectant and medical management require close monitoring and are generally reserved for stable patients with a non-viable pregnancy, and may leave the scar defect unrepaired susceptible to complications in subsequent pregnancies. Surgical methods include exploratory laparotomy, laparoscopy, hysteroscopy or vacuum aspiration¹⁵. Surgical methods carry a benefit of less recurrence because of resection of old scar, with a fresh uterine closure, as well as a shorter follow up period^{10,16}. Uterine artery embolization (UAE) has led to successful management without any hemorrhage in selected cases¹. In patients desiring fertility, medical or a conservative surgical management like uterine wedge resection can be considered^{17,18}. Wedge resection was done in our first case. Long term risks of developing recurrent ectopic pregnancies, uterine rupture and placental attachment abnormalities should be discussed with the patients before making a decision on the mode of treatment¹⁹. Though the risk of recurrence is as low as 3.2-5% meticulous follow up is warranted in subsequent pregnancies^{12,20}. Our patients were all successfully managed surgically and

CONCLUSION

An individualized approach is the best way forward in case of CSP, since it depends on various modifiable and non-modifiable factors. A meticulous follow-up is needed, especially in case of medical management, since complications can be life threatening. An ever increasing rate of Caesarean deliveries mean that obstetricians will be encountering CSP more often in coming times.

REFERENCES

1. Timor-Tritsch IE, Monteagudo A, Santos R. The diagnosis, treatment, and follow-up of Caesarean scar pregnancy. *Am J Obstet Gynecol.* 2012;207:44.e1–13.
2. ACOG Committee on Practice Bulletins Tubal ectopic pregnancy: ACOG practice bulletin. *Clin Manage Guidelines Obstet Gynecol.* 2018;131(3):e91–103.
3. Fylstra DL. Ectopic pregnancy not within the (distal) fallopian tube: etiology, diagnosis, and treatment. *Am J Obstet Gynecol.* 2012;206(4):289–299.
4. Marion L.L., Meeks G.R. Ectopic pregnancy: history, incidence, epidemiology, and risk factors. *Clin Obstet Gynecol.* 2012;55(2):376–386.
5. M.A. Rotas, S. Haberman, M. Levgur. Caesarean scar ectopic pregnancies: etiology, diagnosis, and management. *Obstet. Gynecol.*, 107 (6) (2006), pp. 1373-1381
6. 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.
7. C. Elson, R. Salim, N. Potdar, M. Chetty, J. Ross, E. Kirk Royal College of Obstetricians and Gynaecologists. Diagnosis and management of ectopic pregnancy. *BJOG*, 123 (2016), pp. e115-e155.
8. J.V. Larsen, M.H. Solomon. Pregnancy in a uterine scar sacculus—an unusual cause of postabortal haemorrhage. A case report. *S. Afr. Med. J.*, 53 (4) (1978), pp. 142-143.
9. 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.

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. 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.
12. Jayaram PM, Okunoye GO, Konje J. Caesarean scar ectopic pregnancy: diagnostic challenges and management options. *ObstetGynaecol*. 2017;19(1):13–20.
13. 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;207(5):386. e1–6.
14. Majangara, R., Madziyire, M.G., Verenga, C. et al. Cesarean section scar ectopic pregnancy - a management conundrum: a case report. *J Med Case Reports* 13, 137 (2019).
15. Görker S, Sadun S, Muge H, Mehemet IH. Successful management of cesarean scar pregnancy with vacuum extraction under ultrasound guidance. *Acute Med Surg*. 2018;5(4):358–61.
16. 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
17. Cömert E.H., Şal H., Ekici Y.S., Seda E., Guven G. Cesarean scar pregnancy: a case report. *TürkiyeKlinikleriJinekolojiObstetrik*. 2018;26(1):37–39.
18. Patel M.A. Scar ectopic pregnancy. *J Med Biol Eng*. 2015;65(6):372–375.
19. Rotas M.A., Haberman S., Levгур M. Cesarean scar ectopic pregnancies etiology. *Am Coll Obstet Gynecol*. 2006;107:1373–1381.
20. Ben Nagi J, Helmy S, Ofili-Yebovi D, Yazbek J, Sawyer E, Jurkovic D. Reproductive outcomes of women with a previous history of caesarean scar ectopic pregnancies. *Hum Reprod*. 2007;22(7):2012–5.