

Research Article

A Case Report of Type 1 Caesarean Scar Ectopic Reaching Till 28 Weeks: A Rare Incident

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Abstract

Ectopic pregnancy itself complicates about 2% of all pregnancies. Cesarean scar ectopic (CSP) is the rarest form of ectopic pregnancy and its incidence ranges from 1/1800 to 1/2200. However, the rise in the number of cesarean sections each year and advances in prenatal imaging are responsible for the increase in the number of patients having scar ectopic pregnancies requiring obstetric management. The current standard of care for cesarean scar ectopic pregnancy is therapeutic termination. There are only a few documented cases of CSP resulting in the delivery of the viable neonate. In this article, we report a case of 37 years old middle eastern female, gravida 4 and para 3 who decided to continue the pregnancy against the medical advice and presented at 28 weeks and one day of gestation with contractions and antepartum hemorrhage (APH). On ultrasound single active fetus of almost 27 weeks' gestation in breech position was noted with major placenta previa with suspicion of the morbid placenta.



Her cesarean was done followed by excessive hemorrhage, uterine packing was done and the patient was shifted to Cath Lab for UAE (uterine artery embolization) She received 6 units of PRBC'S (packed red blood cells) 6 units of FFP's (fresh frozen plasma) and 6 units of cryoprecipitate. She remained in ICU (intensive care unit) for 2 days. Her post-natal recovery was uneventful. Her baby was a female baby with an Apgar score of 5/10 and 7/10 after one and 5 minutes respectively. The birth weight of the baby was 1.4 kg. The baby stayed in NICU for almost 8 weeks. The hard work of the neonatology team was paid off with the recovery of the baby and the baby was discharged in stable condition a few days back.

This emphasizes the importance of teamwork and is an excellent example of the multidisciplinary approach. It was with the help of the whole team that not only the life of the patient was saved but the future fertility of the mother was conserved as well, but it was at the cost of excessive hemorrhage which was life-threatening.

The authors, therefore, conclude that till more evidence is awaited, therapeutic termination should be kept as the first treatment option for the CSP and expectant management should not be offered as it is associated with life-threatening complications.

Keywords: cesarean scar ectopic, Uterine artery embolization, hemorrhage, expectant management.

Introduction:

Ectopic pregnancy itself complicates about 2% of all pregnancies. (1) Cesarean scar ectopic is the rarest form of ectopic pregnancy and its incidence ranges from 1/1800 to 1/2200. (2)

However, with the rise in the number of cesarean sections each year the number of patients having scar ectopic pregnancies is increasing as well.

The current standard of care for cesarean scar ectopic pregnancy is therapeutic termination. (3) the termination can be performed via several different routes each with its own set of complications, but if it is left untreated it can progress to morbidly adherent placenta which can lead to uterine rupture or life-threatening hemorrhage. (4-6) Immonen and colleagues raised the question of possible expectant management of these pregnancies, (3) although the authors are not convinced to continue the expectant management of the CSP they are reporting this case who was diagnosed at early pregnancy ultrasound as cesarean scar ectopic and was advised termination of pregnancy, the patient disagreed and then did not come for the follow-up, she reported back in an emergency at 28 weeks with APH.

Case report:

A 37 years middle eastern female who was gravida four paras three with previous three cesarean sections presented at five weeks and 5 days with a history of amenorrhoea, her BHCG was positive and she was requested to do the ultrasound, on ultrasound the cesarean scar pregnancy was confirmed as shown in figure -1. The patient was counseled about the diagnosis and quantitative BHCG was advised. Her quantitative BHCG was 23034.80 mIU/ml (milli-international units per milliliter). The management plan was discussed with the patient and she was advised medical termination of the pregnancy with the methotrexate. The patient refused the treatment and left against medical advice. She was lost to follow up for the next 4 months.



Figure-1: Ultrasound had done at 5 weeks showing scar pregnancy.

After 4 months she presented in the emergency room at 28 weeks and 1 day of gestation with mild bleeding and contractions. On examination she was fully conscious and well oriented to time and place, her pulse was 108 beats per minute and blood pressure was 125/70 mm of HG (millimeters of Mercury). Mild pallor was detected on general physical examination and the abdominal exam, fundal height was consistent with dates, the lie was longitudinal and the presentation was breech. CTG (cardiotocography) was found reactive with 1/10 contractions.

An urgent scan was done and a complete placenta previa was detected with the breech baby. The possibility of the morbid placenta could not be ruled out, as shown in figure 2. The parameters of the baby are shown in figure 3.



Figure 2: Ultrasound showing breech presentation with placenta previa



Figure 3: Ultrasound showing the parameters of the fetus

As the patient was contracting and the bleeding was mild to moderate, she was counseled for an emergency cesarean section and the risk of excessive hemorrhage and hysterectomy discussed. High-risk consent was taken and the senior obstetrician, neonatologist, the anesthesiologist was involved. The blood bank was informed. After almost 60 minutes of the presentation, she was shifted from the emergency room to the operating theatre. The availability of 6 units of the pack cells and 6 units of the FFPs were made available before giving the incision.

The pre-op hemoglobin was 9.6 gm% (grams percent), in the operating theatre general anesthesia was given, the patient was catheterized, cleaned, and draped. The abdomen was opened in Pfannenstiel after removing the previous scar. After entering the peritoneal cavity bladder was found slightly adherent to the lower uterine segment which was dissected and reflected down. Thinning of the scar was noted, a low transverse uterine incision was given. It was a complete placenta praevia. The baby was delivered as a breech through the space available posterior to the right lower edge of the placenta. The baby had an Apgar score of 6 and 7 at 1 and 5 minutes respectively, with a birth weight of 1.4 kg and needed immediate resuscitation and was electively intubated by the neonatologist. After the delivery of the baby, there was excessive hemorrhage even before the separation of the placenta which was found morbidly adherent. The bleeding was so acute that in no time the blood loss reached 2 liters, uterine packing was



done and the placenta was removed in a piecemeal with the help of sponge holding forceps. The interventional radiologist was called for uterine artery embolization (UAE) and in the meanwhile Uterine packing with four roller gauzes and three knots was done and the end was taken out from the cervix for ease of removal later. The edges of the uterine scar were refreshed to ensure the removal of all pieces of the placenta. The uterus was then closed in 2 layers. Hemostasis was secured and the abdomen was closed in reverse order. After the skin closure, an aseptic dressing was done.

The patient during the procedure deteriorated vitally her blood pressure dropped to 52/26 mm of Hg. Two units of PRBC were given during the cesarean. Immediately after the skin closure, the patient was shifted to the Cath Lab for UAE. Her hemoglobin (Hb) dropped to 4.9gm% as checked along with ABG's (Arterial blood gasses).

In the Cath Lab, the gradual improvement was noted in the blood pressure from 60/30 to 98/54 mm of HG in the beginning and at the end of the procedure respectively. She received 2 more units of PRBC's and 4 units of FFP (fresh frozen plasma) in the Cath Lab. The femoral central line was inserted and one gram of calcium gluconate was given in infusion form. ABG's were done before shifting the patient in ICU (intensive care unit) which showed Hb of 6.3 gm%.

Maternal Recovery:

In the ICU she received 2 more PRBC and 6 units of platelets. On operation day she was kept intubated and was monitored closely in ICU. Her ABG's, electrolytes, HB, LFTs (liver function tests) and RFT'S (renal function tests) and coagulation profile were repeated frequently as per ICU protocol and were maintained. The uterus was well contracted and mild to moderate vaginal bleeding was observed. She received syntocinon infusion and tranexamic acid in the first 24 hours along with injectable antibiotics and analgesics. Her vitals were continuously monitored and was found to be stable.

On the first post-op day, the patient was stable and was extubated. The repeated hemoglobin was 9.0 gm%. She remained in ICU for another day for close observation and management. As the patient remained stable, she was shifted to the post-natal ward for further management on day 2 of the cesarean section. Her uterine pack was removed afters shifting the patient to the post-natal ward, it was 4 roller gauzes with three knots and was moderately soaked. After removal of the pack, no active bleeding was observed.

Her recovery thereafter was uneventful and was discharged in stable condition with hemoglobin of 9.8gm % on the 4th post-op day as per protocol.



She received 6 units of PRBC's, 6 units of FFP, and 6 units of cryoprecipitate in the first 48 hours of the delivery.

She was seen on the 12th post-op day in the outpatient department and was vitally stable, afebrile. The abdomen was soft and non-tender and the uterus was well contracted. The abdominal wound was nicely healing and minimal bleeding was observed.

Her ultrasound was done, which ensured an empty uterine cavity and no retained POC's.

Neonatal Recovery:



Figure 4: Picture of the baby on day one of delivery

A female baby with an Apgar score of 6/10 and 7/10 at one and five minutes respectively, was delivered as a breech with a birth weight of 1.4 kg. The baby needed initial resuscitation and then electively intubated and received positive pressure ventilation (PPV) 20/5 and was shifted to NICU in a portable incubator on a mechanical ventilator.

In the NICU the baby was connected to Assisted controlled pressure ventilation (ACPRVC) and received the first dose of Survanta through ETT (endotracheal tube) the second dose was repeated after 12 hours.



The general physical examination of the baby was unremarkable except for the signs of respiratory distress and signs of prematurity. A partial septic workup was done and the antibiotics were started. The baby was kept NPO (Nil per oral) and started intravenous fluids. The baby was monitored as per NICU protocol and managed accordingly. Over almost 55 days the baby was monitored and managed as per the NICU protocol. The baby showed significant improvement over days.

The baby was shifted to room air on the 50th day of life, initially, a couple of desaturation attacks were observed which were treated with oxygen. From 52ND day of life, the baby started maintaining saturation on room air till the time of discharge.

On the evaluation of the baby at the time of discharge, the baby was found active, the brain USG (done on the first day of life and then repeated on the 38th day of life) was unremarkable. The baby was evaluated for ROP (retinopathy of prematurity), no active ROP was found, just the pale optic disc was noted.

Echocardiography was done on the third day of life which revealed moderate PDA (Patent ductus Arteriosus), for which the baby received Ibuprofen, Echocardiography when repeated on the 6th day of life showed that the PDA was closed. Mild Tricuspid regurgitation was noted for which repeat Echocardiography is planned after 3 months. The baby was tolerating full oral feeding before discharge. The baby received PRBC twice for significant tachycardia, on the 12th and then on the 33rd day of life. The baby's weight at the time of discharge was 2.350 kg. Vaccination, metabolic and hearing screen was done before discharge and the baby was discharged in stable condition on 57th day of life as shown in figure 5.



Figure 5: Picture of the baby on the day of discharge (day 57)

Discussion:

An increasing number of cesarean sections and the advancement in prenatal imaging have led to a higher number of patients with CSP requiring obstetric management. (8)

The single-layer closure of the uterus has been blamed for the increased risk of CSP, but the evidence does not support that the double-layer closure of the uterus helps to prevent the CSP. (3) The evidence suggests that the cesarean section done on the unlabored lower uterine segment may interrupt the proper uterine healing and can lead to the increased risk of CSP. (9,10)

It is estimated that there is a 40% chance of the women with diagnosed CSP and managed conservatively to deliver a viable neonate. (3) This can be associated with severe morbidity in the form of massive hemorrhage, possible invasive placentation, injury to the bladder and the bowel and cesarean hysterectomy and can be fatal as well.

The author experienced a life-threatening hemorrhage in this patient due to abnormal placentation as a result of CSP, and due to the availability of the UAE, they were able to save the uterus. The baby also survived though remained in NICU for almost 2 months. In another case series did in China 9 patients reached the third trimester and all of them survived though 6 out of them had the cesarean



hysterectomy. (7)

As the risk of the complications associated with the expectant management of the CSP are life-threatening, whether or not we should let these patients continue the pregnancy is the fruit of thought for the upcoming researchers.

Conclusion:

Though in the reported case the maternal and the neonatal outcome was encouraging the authors do not recommend the expectant management of the CSP due to its association with severe maternal and neonatal morbidity and possible mortality.

References

1. Ash A, Smith A, Maxwell D. "Caesarean scar pregnancy". BJOG: Intl J Obstet Gynaecol. 2007;114:253-63.
2. Grechukhina O, Deshmukh U, Fan L, Kohari K, Abel-Razeq S, Bahtiyar MO, et al. "Caesarean scar pregnancy, incidence and recurrence: five-year experience at a single tertiary care referral centre". Obstet Gynecol.2018;132(5):1285-95.
3. Immonen T, Mirable CP. "Expectant management of caesarean scar ectopic pregnancy: A case report". Gynecol Obstet Case Rep.2020;(6):1-5.
4. Pekar-Zlotin M, Melcer Y, Levinsohn-Tavor O, Tobin J, Vaknin Z, Maymor R. "Caesareanarean scar pregnancy and morbidly adherent placenta. Different or similar"? Isr Med Assoc J.2017;19(3)168-71.
5. Zosmer N, Fuller J, Shaikh H, Johns J, Ross JA. "Natural history of early first trimester pregnancies implanted in caesarean scars". Ultr Obstet Gynecol.2015;46(3):367-75.
6. Michaels AY, Washburn EE, Pocius KD, Bensen CB, Doubilet PM, Carusi DA. "Outcome of caesarean scar pregnancies diagnosed sonographically in the first trimester". J Ultrasound Med.2015;34(4):595-9.
7. He F,Li JQ, Lin y, Su CH, Chen DJ. "Expectant management of 11 cases of caesareansaeen scar pregnancy".2017;52(9):594-9.



8. Cali G, Timor-Tritsch IE, Jaraquemada JP, Monteagudo A, Buca D, Forlani F, et al. "Outcome of Caesareanarean scar pregnancy managed expectantly: Systemic review and meta-Analysis". *Ultrasound Obstet Gynecol.*2018;51:169-75.
9. Maymon R, Halperin R, Mendlovic S, Schneider D, Herman A. "Ectopic pregnancies in a caesarean scar: a review of the medical approach to an iatrogenic complication". *Hum Reprod update.*2004;10:515-23.
10. Najam S, Malik SE, Aqeel S, Rizwan N, Haider AR. "Viable caesarean scar pregnancy: A case report". *Biomedica.*2020;36(1):10-14.

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