

Ectopic Pregnancy in a Cesarean Section Scar

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A thirty-five-year-old Gravida 3 Para 2 Abortion 0 patient with a history of two previous cesarean sections presented with suspected ectopic pregnancy along the cesarean section scar at eight weeks of gestation.

The diagnosis was confirmed by ultrasound scan and the patient had an urgent laparotomy with excision of ectopic pregnancy and repair of the uterus.

The postoperative recovery was uneventful; she received systemic Methotrexate in addition to the surgical treatment.

We believe that combined surgical and medical management ensures the removal of ectopic tissue. To the best of our knowledge, this is the first reported case in the Kingdom of Bahrain.

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Ectopic pregnancy is an important cause of maternal morbidity and mortality. The incidence is 1% to 2% of all pregnancies.

In 90% of cases, the pregnancy is located in the ampullary portion of the fallopian tubes, while the remainder may be implanted in the ovary, cervix, cesarean section scar or abdomen¹. Ectopic pregnancy in a previous cesarean/hysterotomy scar occurs in about 1 in 2000 ectopic pregnancies (6%)². The incidence does not appear to correlate with the number of cesarean deliveries; it is located in the scar and is surrounded by myometrium and connective tissue. The implantation of the conceptus along that site is most likely due to the migration of the embryo through a defect in the lower uterine segment or a fistula in the scar³. Treatment is either surgical or medical using methotrexate.

The aim of this presentation is to report a rare case of ectopic pregnancy along the cesarean section scar, which was successfully managed surgically and medically.

THE CASE

A thirty-five-year-old Gravida 3 Para 2 Abortion 0 at eight weeks and four days of gestation presented with suspected diagnosis of cesarean section scar pregnancy.

The patient had abdominal pain and mild vaginal bleeding. She had no history of syncopal attack. She previously had two full-term lower segment cesarean section deliveries. She had moderate right iliac fossa tenderness with no rigidity nor rebound tenderness. The scar of previous cesareans was transverse.

The cervical os was closed with minimal bleeding and positive cervical excitation. Transvaginal ultrasound (TVS) revealed a gestational sac along the anterior uterine wall corresponding to 7 weeks of gestation with fetal pole and positive fetal cardiac activity, see figure 1.

The endometrial cavity was empty, and the left ovary had 3.5 x 2.4 cm follicle.



Figure 1: Transvaginal Ultrasound Showing Cesarean Section Scar Pregnancy along the Anterior Wall of the Uterus

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Her hemoglobin was 13.7 g/dl and serum level of BHCG was 14499.5 mIU/ml. Other tests were normal.

Laparotomy was decided; the size of the uterus was normal, both tubes and right ovary were normal. The left ovary had a small follicle. There was an intact cesarean section scar ectopic pregnancy of 3 x 3 cm diameter, see figure 2.



Figure 2: Intraoperative Image of Cesarean Section Scar Ectopic Pregnancy

The pregnancy was removed and the incision reached the uterine cavity, through which, uterine curettage was performed. The uterus was closed by continuous suture using Vicryl 2/0.

Postoperative period was uneventful and the histopathology report confirmed ectopic pregnancy.

The patient received Methotrexate postoperatively; her serum BHCG dropped on day one postoperatively and returned to normal on day 25.

DISCUSSION

Cesarean section scar ectopic pregnancy is a very rare condition¹. Due to the rarity of the condition, there is no agreed management.

However, depending on the patient's hemodynamic status, the amount of vaginal bleeding, the duration of pregnancy, the serum beta human chorionic gonadotropins level, the presence or absence of fetal cardiac activity, the patient's will to preserve fertility, local facilities and medical expertise, management could be conservative or radical.

In case of uncontrolled hemorrhage, a radical approach of hysterectomy is indicated⁴. The conservative surgical mode of management involves excision of the ectopic pregnancy by wedge resection and repair of the uterus via laparoscopy or laparotomy, or cervical dilatation and uterine curettage after bilateral ligation of the anterior division of iliac arteries.

Patients who are hemodynamically stable with minimal or no bleeding could be medically treated with local or systemic Methotrexate. However, they require a close and long period of observation because this mode of treatment may not be successful and could be complicated by fatal intra-abdominal hemorrhage. In addition, possible late complication is a morbidly adherent placenta to the uterine scar in a future pregnancy with the associated risk of severe ante and postpartum hemorrhages⁵. In those cases, surgical repair of the scar before the next pregnancy is recommended⁶.

Treated cesarean section scar ectopic pregnancy could be followed by successful pregnancy; however, there is a risk of uterine rupture due to weak scar with increased risk of maternal and perinatal mortality and morbidity⁷⁻⁹. Therefore, patients should be counseled about the possible risks and offered cesarean section delivery¹⁰.

Our case had a successful combined medical and surgical treatment with uncomplicated recovery. Methotrexate was added to the surgical approach to ensure that no chorionic villi are left behind and to avoid persistence of the ectopic tissue.

CONCLUSION

Ectopic pregnancy in a previous cesarean section scar is a very rare but life-threatening condition due to possible uterine rupture and severe intra-abdominal hemorrhage. It requires early diagnosis and prompt and urgent management in order to avoid complications and preserve fertility.

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REFERENCES

1. Bouyer J, Coste J, Fernandez H, et al. Sites of Ectopic Pregnancy: A 10 Year Population-Based Study of 1800 Cases. *Hum Reprod* 2002; 17(12):3224-30.
2. Rotas MA, Haberman S, Levгур M. Cesarean Scar Ectopic Pregnancies: Etiology, Diagnosis, And Management. *Obstet Gynecol* 2006; 107(6):1373-81.
3. Marchiolé P, Gorlero F, de Caro G, et al. Intramural Pregnancy Embedded in a Previous Cesarean Section Scar Treated Conservatively. *Ultrasound Obstet Gynecol* 2004; 23(3):307-9.
4. Atrash HK, Friede A, Hogue CJ. Abdominal Pregnancy in the United States: Frequency and Maternal Mortality. *Obstet Gynecol* 1987; 69(3 Pt 1):333-7.
5. Dover RW, Powell MC. Management of a Primary Abdominal Pregnancy. *Am J Obstet Gynecol* 1995; 172(5):1603-4.
6. Fisch B, Peled Y, Kaplan B, et al. Abdominal Pregnancy Following in Vitro Fertilization in a Patient with Previous Bilateral Salpingectomy. *Obstet Gynecol* 1996; 88(4 Pt 2):642-3.
7. Vial Y, Petignat P, Hohlfeld P. Pregnancy in a Cesarean Scar. *Ultrasound Obstet Gynecol* 2000; 16(6):592-3.
8. Ben Nagi J, Helmy S, Ofili-Yebovi D, et al. Reproductive Outcomes of Women with a Previous History of Cesarean Scar Ectopic Pregnancies. *Hum Reprod* 2007; 22(7):2012-5.
9. Seow KM, Huang LW, Lin YH, et al. Cesarean Scar Pregnancy: Issues in Management. *Ultrasound Obstet Gynecol* 2004; 23(3):247-53.
10. Smith A, Ash A, Maxwell D. Sonographic Diagnosis of Cesarean Scar Pregnancy at 16 Weeks. *J Clin Ultrasound* 2007; 35(4):212-5.