

Case Report

Uterine Caesarean Scar Ectopic Pregnancy

¹Ambreen Naveed Haq, ²Zaiba Sher, ³Sumaira Rashid

¹Consultant, ²Head of Department, ³Postgraduate Trainee, PAEC Hospital, Islamabad.

Correspondence: Dr. Ambreen Naveed Haq, Consultant PAEC Hospital, Islamabad

E-mail: crooji@yahoo.com

Summary

A 37 years old G4P+1, with history of two previous caesarean sections (CSs) was admitted through emergency, diagnosed at a private hospital with viable ectopic pregnancy at scar site and who had already received two injections of methotrexate. At our hospital diagnosis was reconfirmed and she underwent laparotomy. Caesarean Section scar ectopic (CSSEP) was removed and uterus was reconstructed.

Key Words: Uterine Caesarean section scar, CS, Scar ectopic, Surgical management.

Introduction

CSSEP is defined as implantation of pregnancy in a previous CS scar. This is a rare condition, however due to world wide surge in CSs, the incidence of previous scar ectopics has increased. A recent case study states an incidence of 1:2226 of all pregnancies (rate 0.15%) in the previous CS scars and a rate of 6.1% of all ectopic pregnancies with at least previous one CS.¹

Different forms of CSSEP have been described in the literature, ranging from spontaneously conceived pregnancy, IVF embryo transfer, even heterotopic pregnancy which is in itself a rare condition, similarly twins² and triplets³ have also been described along with a heterotopic pregnancy.

The women at risk of pregnancy in a CS scar appear to be those with a history of placental pathology, ectopic pregnancy, multiple CS and Caesarean breech delivery.⁴ There is a histologic difference between receptive endometrium and the endometrial lining of the CS scar. Vial et al proposed two different types of CSSEPs.⁵ The first is due to the implantation of the gestational sac on the scar with progression towards

either the cervico-isthmic space or towards the uterine cavity. Such a situation may progress to a viable birth, but with an increased risk of life-threatening massive bleeding from the site of implantation.⁶ The second is a deep implantation into a post-CS defect with progression towards the bladder, and rupture and bleeding during the first trimester of pregnancy. Some authors believe that the difference between those two types of pregnancy is of paramount importance. In the former, when there is a continuous connection to the cavum uteri (uterine cavity), expectant management is justified since pregnancy may continue until a viable birth is achieved. In the latter, the risk of late first-trimester life-threatening bleeding is increased if immediate treatment is not undertaken.⁷ The most common symptom is painless vaginal bleeding that may be massive. Since there is no specific clinical sign of the CSSEP, endovaginal ultrasonography and color flow Doppler are essential for diagnosis. The ultrasonographic criteria for diagnosis are (i) empty uterus and empty cervical canal, (ii) development of the sac on the inner side of the anterior wall of the isthmic portion, (iii) discontinuity of the anterior wall of the uterus demonstrated on a

sagittal plane of the uterus running through the amniotic sac, (iv) absent or diminished thickness of the myometrium between the bladder and the sac, (v) high velocity with low impedance peri-trophoblastic vascular flow clearly surrounding the sac at Doppler examination.^{8,9}

Miscarriages (Abortion and missed abortion) and cervicoisthmic pregnancies can be sources of confusion in the differential diagnosis of CSSEP. Ultrasonography is a precious diagnostic instrument to differentiate these pregnancy conditions. The differentiating points between CSSEP and cervicoisthmic pregnancy include the absence of normal uterine tissues between the sac and the bladder.⁸

Case Report

A 37 years old woman married for 10 years, G4P2A1, with history of previous two CS's was encountered. Her LMP was 16/4/12 and EDD was 23/1/13. She came through emergency on 09/6/2012. She presented with gestational amenorrhoea of 7 weeks with lower abdominal pain for last 3 days. It was a planned pregnancy, confirmed by positive pregnancy test. Ultrasound at a private hospital had revealed an alive ectopic pregnancy at the scar site. Subsequently she was given 2 doses of Inj. Methotrexate. Later she came to PAEC hospital with complaint of mild lower abdominal pain, more at scar site relieved by rest and medication. At our unit her diagnosis was confirmed by ultrasonography shown in Figure 1, and she was admitted for further management. On examination she was an anxious looking lady, well oriented in time and place with a pulse rate of 90/min, B.P 110/70mm of Hg, Temp 97° F and R/R 16/min. She was not pale, jaundiced, cyanosed or oedematous. Thyroid was not enlarged, lymph nodes were not palpably enlarged, breasts were normal, her height was 5.2 feet and she weighed 70

kgs. The systemic examination revealed no abnormality.



Figure 1. TVS showing a gestational sac in uterine CS Scar. (Annotated ultrasonogram).

Exploratory laparotomy was planned on 11/06/12 (next day) after taking informed consent and counseling of couple.

The operative findings included an ectopic sac identified at the level of internal os at the site of previous scar. Uterine serosa was dissected to clear the sac. Ectopic sac was removed along with products of conception. Haemostasis was secured (Figure 2).

Bilateral tubal ligation was done by Pomeroy's method by the consent of the husband. Four units of platelets were transfused before the incision. Her post operative recovery was uneventful, she was given intravenous antibiotics for 24 hours. And was discharged on 3rd post operative day with the advise to come for follow up in the outpatient department for stitch removal after 1 week.

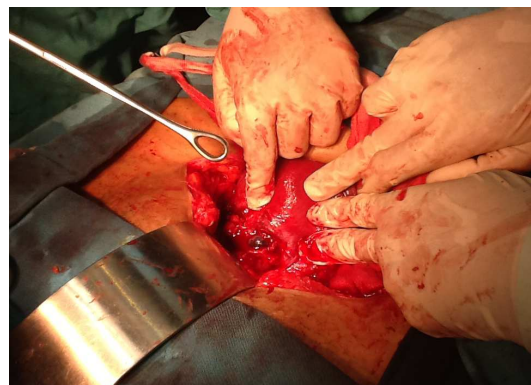


Figure 2. Surgical findings showing the site of removal of ectopic sac, with haemostasis being achieved.

Discussion

CSSEP is a rare type of ectopic pregnancy associated with severe complications such as uterine rupture, uncontrollable bleeding which may lead to hysterectomy, and definitive infertility. Many therapeutic options are available such as Dilatation and Curettage, excision of trophoblastic tissues through either laparotomy or laparoscopy, systemically administered Methotrexate¹¹, and more recently uterine artery embolization.¹⁰ However despite the availability of multiple modalities there is no standard mode of treatment. The lack of data on the best evidence should encourage any individual case to be reported and further multicentre studies for recommendations should be carried out.¹²

Conclusion

No guidelines for the management of CSSEP have been published up till now.

There has been a rise in its incidence in previous few decades though CSSEP is a rare but a catastrophic complication of previous CS birth, secondly trainee doctors should be aware of potential dangers of CSSEP in early pregnancy. Ultrasonologists should follow strict imaging criteria to assess it.

References

1. Kamal Singh, Anjali Soni, and Shelly Rana, "Ruptured Ectopic Pregnancy in Caesarean Section Scar: A Case Report". *Obstetrics and Gynecology* vol. 2012, Article ID 106892, 3 pages, 2012. doi:10.1155/2012/106892
2. Salomon LJ, Fernandez H, Chauveaud A, Doumerc S, Frydman R Successful management of a heterotopic Caesarean scar pregnancy: potassium chloride injection with preservation of the intrauterine gestation: case report *Hum Reprod* 2003 Jan;18(1):189-191.
3. Hsieh BC, Hwang JL, Pan HS, Huang SC, Chen CY, Chen PH Heterotopic Caesarean scar pregnancy combined with intrauterine pregnancy successfully treated with embryo aspiration for selective embryo reduction: case report. *Hum Reprod* 2004 Feb;19(2):285-287.
4. Maymon R, Halperin R, Mendlovic S, Schneider D, Vaknin Z, Herman A, Pansky M. Ectopic pregnancies in Caesarean section scars: the 8 year experience of one medical centre. *Hum Reprod* 2004 Feb;19(2):278-284.
5. Vial Y, Petignat P, Hohlfield P. Pregnancy in a Caesarian scar. *Ultrasound Obstet Gynecol* 2000;16:592-593.
6. Hemminki E and Merilainen J. Long-term effects of Caesarian sections: ectopic pregnancies and placental problems. *Am J Obstet Gynecol* 1996; 174:1569-1574.
7. Ghezzi F, Lagana D, Franchi M, Fugazzola C and Bolis P. Conservative treatment by chemotherapy and uterine arteries embolization of a Caesarian scar pregnancy. *Eur J Obstet Gynecol Reprod Biol* 2002; 103:88-91.
8. D. L. Fylstra, T. Pound-Chang, M. G. Miller, A. Cooper, and K. M. Miller, "Ectopic pregnancy within a cesarean delivery scar: a case report." *American Journal of Obstetrics and Gynecology* 2002; 187(2): 302-304.
9. D. Jurkovic, K. Hillaby, B. Woelfer, A. Lawrence, R. Salim, and C. J. Elson, "First-trimester diagnosis and management of pregnancies implanted into the lower uterine segment Cesarean section scar," *Ultrasound in Obstetrics and Gynecology* 2003;21(3):220-227.
10. Anis Fadhlaoui, Mohamed Khrouf, Khaled Khémiri, Kais Nouria, Anis Chaker, and Fethi Zhioua, "Successful Conservative Treatment of a Cesarean Scar Pregnancy with Systemically Administered Methotrexate and Subsequent Dilatation and Curettage: A Case Report". *Obstetrics and Gynecology* 2012, Article ID 248564, 6 pages, 2012. doi:10.1155/2012/248564.
11. Anis F Mohamed K, Khaled K, Kais N, Anis C, and Fethi Z. Successful Conservative Treatment of a Cesarean Scar Pregnancy with Systemically Administered Methotrexate and Subsequent Dilatation and Curettage: A Case Report. *Obstet Gynecol* 2012; 24564. Published online 2012 January 31. doi: 10.1155/2012/248564 .PMCID: PMC3335663
12. Litwicka K, Greco E. Caesarean scar pregnancy: a review of management options. *Curr Opin Obstet Gynecol* 2011 Dec;23(6):415-421. doi: 10.1097/GCO.0b013e32834cef0c.