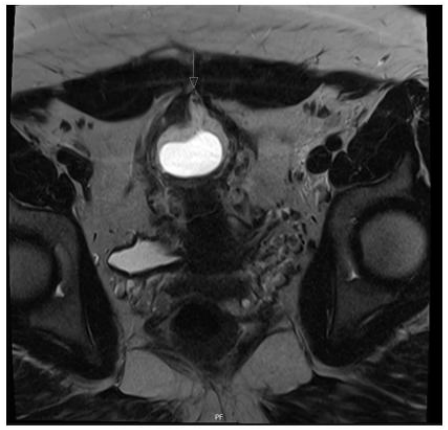
Figure 1. MRI - The anterior uterus, at the site of caesarean scar, is tethered to the anterior abdominal wall at the site of surgical incision.



Live caesarean scar pregnancy managed with laparotomy: a case report.

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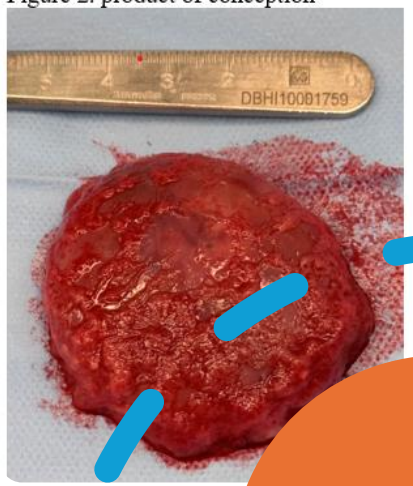
Reference
1.Ilan E Timor-Tritsch, et al. 2024. Caesarean Scar Pregnancy. https://www.uptodate.com/contents/cesarean-scar-pregnancy?search=cesarean%20scar%20pregnancy&source=search_result&selectedTitle=1%7E356usage_type=default&display_rank=1UpToDate. (Accessed 24.11.2024)
2.Joshi JS, Potdar J, Shanoo A, Patel N. Cesarean Scar Ectopic Pregnancy: A Rare Case. Cureus. 2024 Feb 26;16(2):e54820. doi: 10.7759/cureus.54820. PMID: 38544613; PMCID: PMC10966624.
3.Ash A, Smith A, Maxwell D. Caesarean scar pregnancy. BJOG. 2007 Mar;114(3):253-63. doi: 10.1111/j.1471-0528.2006.01237.x. PMID: 17313383.
4.Fylstra DL. Ectopic pregnancy within a cesarean scar: a review. Obstet Gynecol Surv. 2002 Aug;57(8):537-43. doi: 10.1097/00006254-200208000-00024. PMID: 12181153.
5.Majangara R, Madziyire MG, Verenga C, Manase M. Cesarean section scar ectopic pregnancy - a management conundrum: a case report. J Med Case Rep. 2019 May 10;13(1):137. doi: 10.1186/s13256-019-2069-9. PMID: 31072411; PMCID: PMC6509185.
6.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 Jul;22(7):2012-5. doi: 10.1093/humrep/dem078. Epub 2007 Apr 20. PMID: 17449510.
7.Ban Y, Shen J, Wang X, Zhang T, Lu X, Ou W, Hao Y, Mao Z, Li S, Tao G, Wang F, Zhao Y, Zhang X, Zhang Y, Zhang G, Cui B. Cesarean Scar Ectopic Pregnancy Clinical Classification System With Recommended Surgical Strategy. Obstet Gynecol. 2023 May 1;141(5):927-936. doi: 10.1097/AOG.0000000000005113. Epub 2023 Apr 5. PMID: 37023450; PMCID: PMC10108840.
8.Sel G, Sucu S, Harma M, Harma MI. Successful management of cesarean scar pregnancy with vacuum extraction under ultrasound guidance. Acute Med Surg. 2018 Aug 13;5(4):358-361. doi: 10.1002/ams2.362. PMID: 30338082; PMCID: PMC6167402.

Figure 2. product of conception



- Case presentation

A 32-year-old female, third gravida with 8 weeks of amenorrhea and two previous caesarean section was referred by her general practitioner to our hospital with an ultrasound suggestive of caesarean scar pregnancy for management. The transvaginal ultrasound showed the gestational sac was lower lying in the anterior segment and appeared to be protruding into the myometrium/caesarean section scar with measured residual myometrial thickness around 4mm. The yolk sac was measuring 2.7mm and there was foetal cardiac activity at a normal rate of 176 beats per minute.

The patient presented to Emergency Department (ED), asymptomatic. It was a planned pregnancy and she denied abdominal pain or vaginal bleeding. On physical examination she was vitally stable with a pulse rate of 80 beats per minutes and a blood pressure of 100/60 mmHg. On investigation, her routine blood investigations, including a complete blood profile, urine analysis, and liver and renal function tests, were normal. Her beta-human chorionic gonadotropin (HCG) level was 62630 IU/L.

This patient had two caesarean sections in the past. Her first caesarean section was uncomplicated and was due to failed cervical ripening in the context of induction of labour for pre-eclampsia 5 years ago. Significant abdominal and peritoneal adhesion were noted during the subsequent elective caesarean section which was performed 3 years ago. During that caesarean section, the lower segment of the uterus was not able to be identified. Delivery of the baby was achieved by lower segment uterine incision through the adhesion scar tissue and the uterus was closed in two layers.

The patient was admitted. The MRI scan findings were concordant with a scar ectopic pregnancy with decidual entering an expanding the prior caesarean scar with only a thin sliver of myometrium overlying the decidua. The anterior uterus, at the site of caesarean scar, is tethered to the anterior abdominal wall at the site of surgical incision [Figure 1]. The gestational sac measures 30 x 15 x 49 mm. The patient was consented for laparotomy. Abdominal entry through a transverse lower abdominal incision over the old caesarean scar. There was a soft and vascular sac presented at the previous caesarean scar. Myometrium was absent at the implantation site. A transverse incision was made, and the product of conception was gently taken out [Figure 2]. The uterine scar was excised, re-hashed and closed in two layers.

The histopathological examination of the product of conception was diagnostic of CSP. This patient was counselled not to conceive for at least 12 months.

The patient was followed up 6 weeks post-surgery. She recovered well and had her period. She has been using condom as contraception.

- Discussion

Previous caesarean sections are the most common cause of myometrial abnormalities, other uterine procedures, such as dilatation and curettage (D&C), manual removal of placenta, myomectomy, metroplasty, have also been linked to scar pregnancies (1,3,4).

Though our patient had undergone two previous caesarean sections, the number of caesarean sections appear to have no impact as an independent risk factor (5). Approximately one- third of the patients with CSP are asymptomatic at the time of ultrasound diagnosis (1). For patients with symptoms. vaginal bleeding and abdominal pain are the most common presentations.

CSP treatment modalities are dependent on the case presentation. Apart from medical and surgical management, expectant management can be offered but requires strict compliant and close monitoring. Some CSPs may continue to a viable gestation. Series describing outcomes of expectantly managed CSPs all involve small case numbers and high hysterectomy rates (1). In our case of report, surgical excision was our treatment of choice because the foetus had active cardiac activity, and the bHCG levels at the diagnosis were high. Surgical treatment is the most definitive treatment option that removes the gestation and offers an opportunity to repair the uterine defect and a chance at future fertility (5). Surgical excision can be achieved via laparotomy, laparoscopy, and hysteroscopy or vacuum aspiration (8). Yanli Ban's team has created a new CSP clinical classification and relatively matched surgical treatment strategy recommendation based on average diameter of the gestational sac and anterior myometrium thickness. They have achieved an overall success rate of 97.5% (550/564 successful) and aimed at least invasive treatments with minimal complications (7). The risk of recurrent CSP is low, 3.2 – 5.0 % (6). Subsequent pregnancies following CSP have been reported (1).