



Case Report

Isthmocele of lateral wall of uterus encountered at Suction evacuation- A maternal near-miss

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ABSTRACT

A 29-year-old young third gravida with history of previous 2 caesarean sections who was referred as partial mole at 9 weeks of pregnancy was evaluated and diagnosed to have missed abortion. Clinically her general condition was good, uterus was 14 weeks size and she underwent suction evacuation. Torrential haemorrhage occurred after removal of some products of conception and a bag like structure was felt in the lower pole of uterus on passage of curette. Onsite USG evaluation suspected scar pregnancy and she underwent immediate laparotomy and bilateral internal iliac artery ligation because of haemorrhagic shock. At laparotomy left lateral wall mass of size 2x3 cm was found which was communicating to the uterus suggestive of Isthmocele. Excision and repair was carried out and she recovered well due to timely blood transfusion. This finding of isthmocele was missed on routine ultrasound evaluation prior to management plan mainly because of its location.

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1. Introduction

With the increasing caesarean section rates the incidence of caesarean scar ectopic pregnancies are on the rise. In women with history of one caesarean section the incidence varies from 1 in 1800 to 1 in 2216 and if the condition is not diagnosed early can result in life threatening haemorrhage or uterine it rupture.¹

Uterine scar defects are called niche, diverticulum or pouch and these can predispose to caesarean scar ectopic and these are usually diagnosed in non-pregnant state by transvaginal ultrasonography and there are no standard guidelines to manage them. We report a case of uterine diverticulum or Isthmocele encountered during suction evacuation for missed abortion which was a maternal near miss. Reports of Lateral wall defects were not found in literature.

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2. Case Report

An young third gravida with two living children born out of two previous Lower segment caesarean sections presented at 9 weeks of gestation with history of spotting per vaginum of one day duration. Spotting was spontaneous in nature and intermittent. Her urine pregnancy test was positive at 50th day of missing period. There was no history of pain lower abdomen, discharge per vaginum or passage of grape like vesicles. She gave no history of fainting episodes. There was no history of trauma or coitus. Her previous two pregnancies ended up in lower segment caesarean section and she was not sterilized as she was not willing for the same. Her last caesarean section was two years ago. There was no significant personal or family history.

With the complaint of spotting, she had consulted a local practitioner who performed an ultrasound and diagnosed her to have a molar pregnancy and advised to go to a tertiary care centre. On arrival to our Emergency services, she was haemodynamically stable. Her Pulse rate was 80/min and blood pressure was 120/80 mmHg. She had

no polar or lymphadenopathy. Abdominal examination revealed pfannenstiel scar and the uterus was 14 week size with no external ballotment. There was minimal spotting per vaginum with no evidence of any active bleeding. Cervix and vagina were healthy, fornices were free. A provisional diagnosis of missed abortion/ partial molar pregnancy was made based on USG findings performed soon after admission. USG (TAS) revealed an irregular gestational sac with a fetal pole with no cardiac activity. Placenta with few anechoic areas was anterior and there was no evidence of invasion of bladder and lower pole of the uterus was well delineated. She was planned for elective suction evacuation under anaesthesia on the following day. Four hours prior to the procedure cervical ripening was done with prostaglandin gel 0.5 mg intracervically as the cervical os was pin-point. Under general anaesthesia evacuation was attempted where in some foetal parts were obtained, however there were no vesicles. There began a torrential vaginal bleeding that did not respond to bimanual uterine compression or multiple uterotonic agents. Call for help was made and immediately attended by the seniormost member of the department. Remnant products of conception were gently curetted out under ultrasound guidance. There were multiple echogenic areas in the lower part of the uterine musculature (Figure 1) and on Doppler the area seemed vascular (Figure 2) While doing curettage under USG guidance, the endometrial cavity appeared irregular and a bag like feel was felt with the curette. Caesarean scar ectopic was suspected. As there was persistent bleeding, the procedure was abandoned. Intracervical foley tamponade was given. The patient had worsening tachycardia and hypotension necessitating inotropic agents. Hence the decision to proceed with laparotomy was made after seeking consent from relatives. Intraoperatively uterus was 8 weeks size and was found flabby and there was no bulge in the uterovesical fold. Bilateral internal iliac artery ligation was quickly accomplished. On inspecting the uterus carefully, there was 2*3 cm globular mass on the posterolateral aspect of uterus (Figure 3) projecting into the broad ligament which was firm palpation. The mass was opened by a linear incision on its superior aspect and few old blood clots and products were removed. It was found to be communicating to the uterine cavity (Figure 4). It was excised partially and the overlying myometrium and serosa were closed in layers. Intraperitoneal drain(IP) was placed. She was transfused with 3 PRBC, 4 FFPs and 4 platelets. She was successfully extubated and inotropes were stopped after 2 hours of shifting to ICU. Post operatively her coagulation profile and ABG (Arterial Blood Gas Analysis) remained within normal limits. On the following day her Hb was 6gm% and she received two more PRBCs and 4 more FFPs. Post transfusion hemoglobin was 9g%, Patient remained stable and afebrile, IP drain was removed on POD 2, and she was discharged on POD -7. At follow up after 3 months she was

in good health and she did not have excessive bleeding or pain during her menstruation.

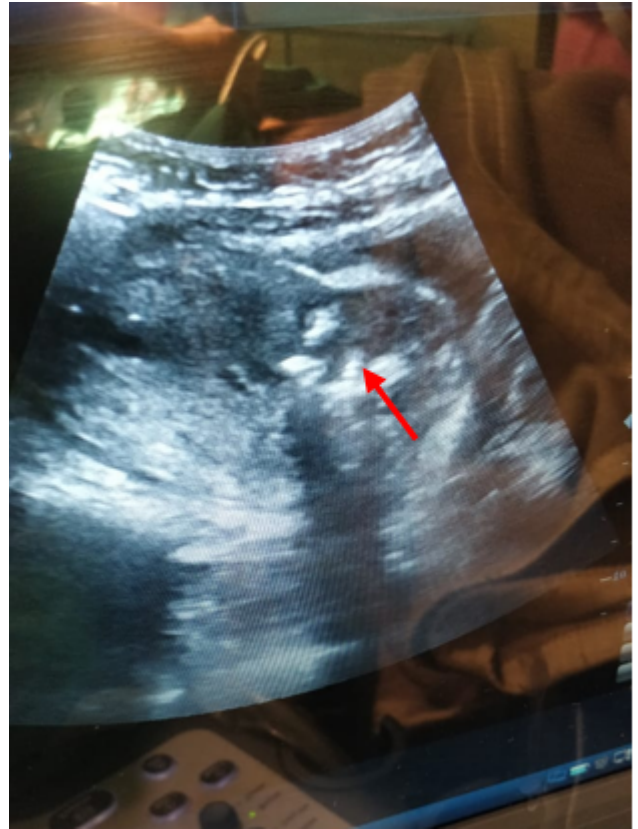


Fig. 1: Trans-abdominal Ultrasound showing multiple echogenic areas in the lower part of uterine musculature

3. Discussion

Caesarean scar defects are recently recognized to cause intermenstrual bleeding and the most lifethreatening complication is the implantation in the outpouch which becomes an ectopic pregnancy with its subsequent complications. Diagnosis and management in the non pregnant state is the ideal to avoid complications due to subsequent pregnancy.

The defects may be diagnosed on hysterosalpingography as an anatomical defect and a study undertaken in 148 women with prior caesarean section has shown as high as 60% having the defect. The defects were linear in 35% and 65% appeared as outpouchings or diverticula. The location of the diverticula were found to be in the lower uterine cavity (54%), isthmus (36%).and at the upper endocervical canal (10%).² In the present case we however found the diverticulum at the left lateral wall of loweruterine segment of previous scar at the time of laparotomy.



Fig. 2: Picture of Doppler flow of Uterus showing increased vascularity

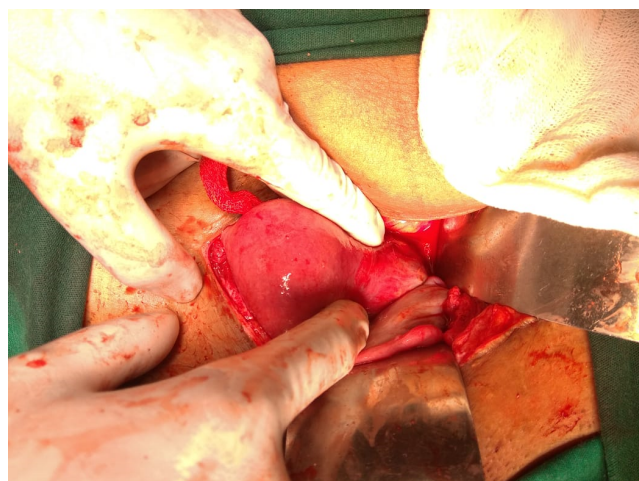


Fig. 3: Intra-operative picture showing lateral wall Isthmocele

Ultrasonographic diagnosis can be made by transvaginal route and the defects are defined as indentations representing myometrial discontinuity at the site of the caesarean scar that communicates with the uterine and cervical cavity as seen on contrast enhanced sonohysterography. These can also be diagnosed on hysteroscopy, MRI and there is no gold standard for detection. Three dimensional USG is also a useful tool which enables to measure the size of the niche /defect so that treatment by hysteroscopy or laparoscopy may be planned.



Fig. 4: Isthmocele communicating to the Uterine cavity

Caesarean scar defects can be treated hysteroscopically by excision of the fibrous tissue and cauterization of abnormal vessels but if pregnancy is intended it is better to manage laparoscopically to excise and suture effectively to strengthen the scar.³

Pregnancy occurring in a caesarean section scar leads to invasion of the fibrous tissue and, myometrial tissue of the defect and can lead to uterine scar rupture and haemorrhage even in the first trimester.^{4,5} In caesarean scar ectopic pregnancies, high index of suspicion for the presence of diverticula is necessary. The USG criteria for diagnosis of caesarean scar ectopic are well defined at present⁶ and need to be followed in early pregnancy scans and a triangular/oval gestational sac that fills the niche most appropriately gives a clue for the diagnosis. Misdiagnosis as inevitable miscarriages or cervical pregnancies is common and is reported in 13.6%.⁷

Maternal near miss is defined as very ill pregnant or recently delivered woman who nearly died but survived a complication during pregnancy, childbirth or within 42 days of termination of pregnancy. This woman falls under the category of management specific criteria as per WHO⁸ Timely recognition of the problem by USG in Operation theatre helped to suspect caesarean scar pregnancy and the defect and maternal mortality was averted. This was possible as the patient was referred early to tertiary care centre where expertise and facilities for blood transfusion were available. Treatment options for caesarean scar pregnancy are to be individualised depending on the clinical presentation, the diagnostic modalities, facilities available and the expertise and available for laparoscopic or hysteroscopic resection, radiological interventions or by

sequential management.⁶

4. Conclusion

USG evaluation in early pregnancy is essential in women with previous history of caesarean section. The site of implantation to be evaluated carefully. In case of adherence further evaluation by MRI is essential to diagnose isthmoceles. Caesarean scar defect which is lateral as in this case may be missed on USG during pregnancy. In case of torrential haemorrhage, a quick bilateral internal iliac artery ligation saves life of the woman.

5. Conflict of Interest

The author(s) declare(s) that there is no conflict of interest regarding the publication of this article.

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