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Postpartum uterine scar dehiscence leading to secondary PPH: Unusual sequelae: A case report

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Abstract

Incidence of Caesarean sections is increasing in the World and Obstetricians are becoming more inclined to offer trial of vaginal birth following a single uncomplicated Caesarean section due to growing recognition of high morbidity associated with repeat abdominal surgeries, and relative rarity of complications of Caesarean scar defect (CSD) after subsequent vaginal deliveries. The diagnosis of CSD such as uterine scar dehiscence in postnatal period still remains elusive due to its vague presentation. An incorrect diagnosis or delay in diagnosis can lead to unnecessary interventions or delay in the management of patient symptoms. CSD is a complication of caesarean section with implications for abnormal uterine bleeding. Most CSD cases are discovered incidentally or with the development of menstrual changes. CSD rarely have a longer latency period, resulting in postpartum presentation of bleeding and abdominal pain. Secondary postpartum haemorrhage due to partial or complete dehiscence of uterine wound after caesarean section is unusual. This is a patient with secondary postpartum haemorrhage following uterine dehiscence after VBAC. Conservative management failed to control the bleeding, and patient eventually needed hysterectomy. All women having significant PPH following caesarean should undergo evaluation for any defect in the scar. Sometimes, Scar dehiscence has been diagnosed and repaired after many years of caesarean section in women with persistent abnormal bleeding. Hence, this condition may have long-term implication if missed postpartum.

Keywords: Caesarean scar defect, secondary postpartum hemorrhage, VBAC (Vaginal birth after caesarean)

Introduction

Caesarean sections (CS) have become common practice in the world. And as a result, more women will therefore attempt a vaginal delivery with a scarred uterus in their subsequent pregnancies. Socio-economic factors, advanced maternal age, assisted reproductive techniques and uterine surgeries such as myomectomies all contribute to a rise in the rate of Caesarean section. One of the most serious complications for both the mother and fetus is scar dehiscence and less commonly uterine rupture. Caesarean scar defect (CSD) occurs by the formation of a uterine diverticulum at the site of a previous caesarean section incision. With increasing caesarean section rates, more attention has been placed on the complications of CSD, which include Secondary PPH, abnormal uterine bleeding (AUB), dysmenorrhoea, chronic pelvic pain, and secondary infertility ^[1].

Secondary postpartum haemorrhage (PPH) after caesarean occurs in about 1: 365 cases ^[2]. The most common etiological factors are retained products of conception and subinvolution of the placental site. A rare cause is partial or complete dehiscence of the lower uterine segment incision ^[2]. The patient may present with excessive vaginal bleeding and pelvic pain as early as 11 days to as late as 12 weeks after surgery ^[3]. She may also present with dysmenorrhoea and intermenstrual bleeding a few years after the caesarean section (CS) ^[3]. Previous studies suggest that a past history of vaginal delivery in a woman with a previous Caesarean section leads to a higher probability of a successful vaginal delivery and lower risk ^[4] of uterine scar separation. This is a rare case of uterine scar dehiscence diagnosed in the postnatal period in a woman with two successful vaginal births after Caesarean section (VBACs) who was managed conservatively initially but eventually needed surgical intervention.

Case

A 35-year-old PARA 6 LIVE 5 with one previous caesarean section with 2 VBAC was referred to us with postpartum bleeding since 45 days with passage of clots for 5 days. There was a history of similar episode 3 weeks back when she was managed conservatively with intravenous antibiotics. There was no history of fever, unhealthy vaginal discharge, or wound infection. She had a VBAC 45 days back. This VBAC was performed at a local private hospital for an IUD baby.

On examination, there was lower abdominal tenderness with no guarding or rigidity. Abdominal scar was healthy. No abdominal mass was palpable. On pelvic examination, uterus was bulky (6 weeks) and OS was closed. There was active bleeding which was moderate in amount. Ultrasound showed Bulky uterus with minimal free fluid in endometrial cavity, a rent of 7mm is seen in anterior wall through which echogenic material (? omentum) is seen reaching out and occupying cervix.(Figure 1 & 2). Her haemoglobin was 9 gm %. Platelet count and coagulation profile were within normal limits. CT showed postpartum mildly bulky uterus with moderate hypodense fluid collection within endometrial cavity with a defect in anterior myometrium in lower uterine body (at the site of LSCS incision) with endometrial fluid extending upto the defect and adherent mesentery to the defect.

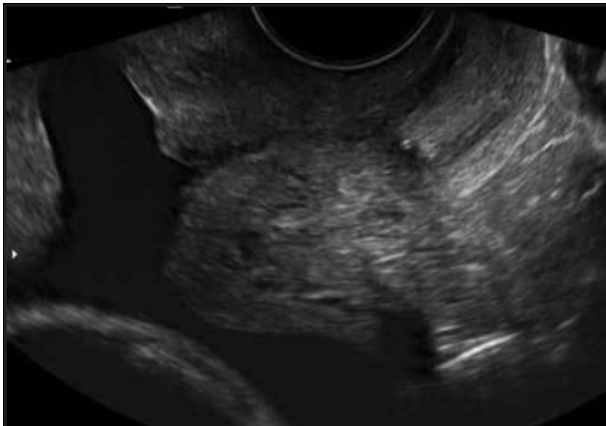


Fig 1: (USG pic showing scar dehiscence)



Fig 2: (CT image showing scar dehiscence)

Patient was still bleeding moderately even on conservative treatment and was thus taken up for emergency laparotomy. During laparotomy, there was minimal hemoperitoneum. The uterus was enlarged to about 6-8 weeks size flobby with a scar dehiscence of 4x3 cm seen at previous scar site and omentum

was adhered to lower margin and bladder was adhered to lower uterine scar margin. Omentum was herniating through the defect (Figure 3 & 4). Bladder wall was intact. The margins of the incision were unhealthy, necrosed and friable and therefore the decision was taken to proceed for a total abdominal hysterectomy in view of her parity. A swab for culture and sensitivity was taken from the margins of the uterine incision which later came out to be sterile. She received 1 unit of packed cells. Her postoperative period was uneventful and she was discharged after stitch removal.

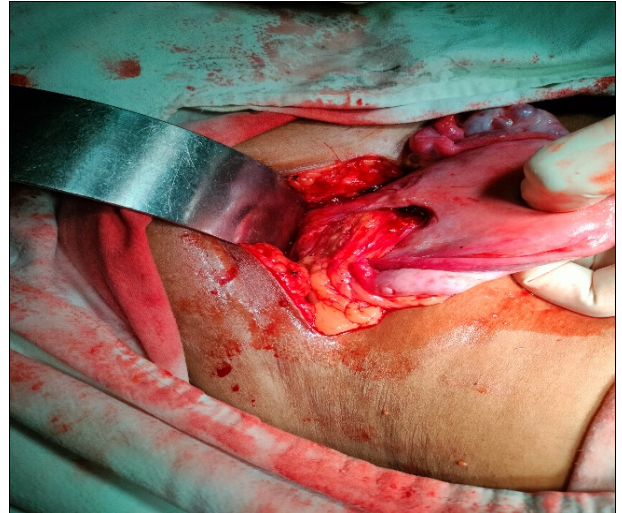


Fig 3: (OT Image)



Fig 4: (Removed Specimen)

Discussion

A uterine scar rupture is a rare event (incidence 0.5%), and a uterine dehiscence is equally rare (incidence 0.06% to 3.8%). Symptoms of a uterine dehiscence in the postnatal period are non-specific and patients can present with abdominal pain, sepsis, or postpartum haemorrhage. The traditional causes of secondary PPH which typically are retained placental fragments are less likely to arise after caesarean section because delivery of the placenta is directly observed. The other causes are subinvolution of placental site, fibroids, infection, gestational trophoblastic disease, and rarely AV malformation. Severe PPH due to partial or complete dehiscence of uterine wound is unusual and the bleeding is probably due to eroded vessels on the uterine margin as was seen in our case.

Reported risk factors are nulliparity, diabetes, emergency surgery, infection, and incision placed too low in the uterine segment. Supra-pubic tenderness suggested possible endomyometritis in our case. This case report points out that it is also important to consider uterine dehiscence especially if clinical findings suggest localised pelvic tenderness or pelvic abscess. Whenever the clinical and ultrasound findings do not suggest retained placental tissue, further investigations should be carried out. It is important not to get tempted to do a uterine curettage which can further damage the nonhealing uterine wound. Whereas a routine transvaginal ultrasound may show only fluid collection or haematoma in the scar area, a 3D ultrasound may identify dehiscence better. An MRI with a heavily T2 weighted image may show a bright fluid filled tract. A power Doppler imaging will be additionally useful to distinguish uterine pseudoaneurysm and A-V fistulas. It will usually show characteristic blood flow pattern in these situations. A beta HCG may be additionally helpful to rule out choriocarcinoma. When a complete dehiscence is suspected or the patient is unstable or in presence of fulminant infection, it is better to go for exploratory laparotomy directly. Otherwise, pelvic arteriography may be recommended to confirm the presence of acquired vascular malformations [8]. In the same sitting, embolisation may be therapeutic in absence of major infection. On exploratory laparotomy, the uterine incision may appear healthy or necrotic. The dehiscence of a fresh caesarean section may be associated with an acute infection. Infectious necrosis and endomyometritis may be also present [5]. In our case, margins were unhealthy and culture report was sterile. Suture material reaction, haematoma, and retrovesical haematoma have all been implicated in the dehiscence of uterine incision, but in our case it probably was the case [5]. Conservative resuturing after debridement can be done but if the margins of the wound are infected or if there is a marked endomyometritis or intraabdominal abscess, hysterectomy is preferred [5]. There are reports of conservative surgery even with infection [3]. The consequences of this complication for a future pregnancy is unknown [2]. It has been recommended that all women who retain their uterus after a significant PPH following CS should undergo evaluation for any defect of scar [2]. Laparoscopic and vaginal repair of scar dehiscence has been diagnosed and repaired after many years after caesarean section [6, 7]. Therefore, this condition if missed immediate postpartum can have long-term implication.

Radiologically, CSDs demonstrate at least one of four key sonographic findings: 1) a wedge defect with a depth of at least 1 mm and an indentation of the myometrium of at least 2 mm in the uterine isthmus at the caesarean section scar site, 2) inward scar protrusion, 3) outward protrusion and haematoma, or 4) scar retraction. Rarely, a cystic mass may bulge anteriorly under the bladder. This typically contains low-level echoes consistent with unclotted menstrual blood, similar to the ultrasonography images in this case.

One of the long-term sequelae associated with an occult scar dehiscence is a 'niche formation'. A niche is an interruption in the myometrium at the level of the previous CS scar. Thinning of the myometrium creates a reservoir where debris and menstrual blood can accumulate. Women often report symptoms such as dysmenorrhoea, menorrhagia, postmenstrual bleeding, pain or dyspareunia.

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