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CASE STUDY

A RARE CASE OF SPONTANEOUS CAESAREAN SCAR DEHISCENCE PRESENTED AS PYOPERITONEUM DURING PUERPERIUM

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ABSTRACT

Uterine scar dehiscence is the disruption of the integrity of myometrium which may be complete or incomplete depending on the intactness of serosa. It can present as endometritis, sepsis & pelvic abscess. We report a case of a 24-year-old woman presented on 30th day of puerperium following caesarean section was admitted through our emergency service with complaint of high grade fever & abdominal distension. Patient's was managed in an intensive care unit. After stabilization of patient she was shifted to operation theatre. Intraop she had uterine scar rupture with pyoperitoneum. Due to grossly necrotic tissue over the scar, peripartum hysterectomy with peritoneal lavage was done. Her general conditions improved after the surgery. These patients usually have features of septicemia like high grade fever, tachycardia, and tachypnoea with lower abdominal pain and possible signs of peritonitis depending on the spread of abscess. They should be managed with intravenous broad spectrum antibiotics; drainage of pyoperitoneum and in some cases peripartum hysterectomy may be required.

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INTRODUCTION

Uterine scar dehiscence is the disruption of the integrity of myometrium which may be complete or incomplete depending on the intactness of serosa (Kaundinya, 2015). Uterine scar dehiscence can present either immediately after childbirth or some may have presentation after about 2-4 weeks of delivery (Arulkumaran *et al*., 1992). The incidence of post caesarean uterine scar dehiscence ranges from 0.06% to 3.8% (Royo *et al*). The usual presentation is secondary post-partum haemorrhage (PPH) but there may be endomyometritis, formation of pelvic abscess with localized or generalized peritonitis (Dhar *et al*., 2012). Postpartum pelvic abscess is a very rare complication occurring in < 1% of patients with postpartum endometritis (Alwani *et al*., 2014). Once peritonitis occurs as a result, sepsis may ensue severe complication which is life-threatening and requires rapid, accurate, and precise diagnosis (Landon *et al*).We are reporting this case of spontaneous uterine scar dehiscence during puerperium following caesarean section with formation of pyoperitoneum which is a rare occurrence with a unique presentation.

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Case report

A 24-year-old woman on 30th day of puerperium following caesarean section was admitted through our emergency service with complaint of high grade fever for 8days, abdominal distension and retention of urine for 2 days. On taking a detailed history, she revealed she had an emergency caesarean section for breech presentation in a district head quarter hospital. There was intraoperative atonic PPH, controlled with conservative management. One unit of whole blood was transfused and her postpartum recovery was uneventful. She has received 3days of injectable antibiotics (Cefoperazone and Sulbactum) followed by oral tablet Cefexime for 4 days. She developed high grade fever on 22nd puerperal day & it continued for 8days. For the same complain she was treated in a local hospital, but as the patient developed abdominal distension and her general condition deteriorated she was referred to our institution. At the time of admission patient was conscious, oriented with the body temp of 102^0 F. On examination she found to have in septic shock. She was severely pale with tachycardia, tachypnoea and hypotension. Her chest examination showed bilateral fine basal crepitation. Abdominal examination revealed distension with guarding, rigidity and rebound tenderness more over the lower abdomen. On pelvic examination, there was foul smelling discharge per vaginum without any bleeding. The uterus size couldn't be well

appreciated. Posterior fornix was full with cervical motion tenderness was present. So a provisional diagnosis of puerperal sepsis with peritonitis was made. She was investigated to find out the cause of sepsis. Her blood investigations revealed severe anaemia (Hb 6.5), Neutrophilic leucocytosis (Neutrophil 86%) and hypoalbuminemia (Albumi n2.7 mg/dL). Her renal function test was normal, liver function test elevated two times of baseline. X-ray chest revealed basal atelectasis. The abdomino-pelvic ultrasound examination revealed a complete myometrial defect of size 3cm on the anterior wall of the lower segment of uterus with anechoic collection inside the uterine cavity. Also there was gross echogenic collection in the cul-de-sac and pelvic cavity (Figure 1). Laparotomy was planned after two unit of blood transfusion and 24hours of broad spectrum antibiotics (Pipercillin and Tazobactum). Intraoperatively about 2 liters of pyogenic fluid drained and sent for fluid analysis and culture-sensitivity. There was dense bowel adhesion between the bowel loops. Following adhesiolysis we found a 4-cm-long dehiscence at center of the uterine caesarean section wound with necrotic edges (Figure 2).

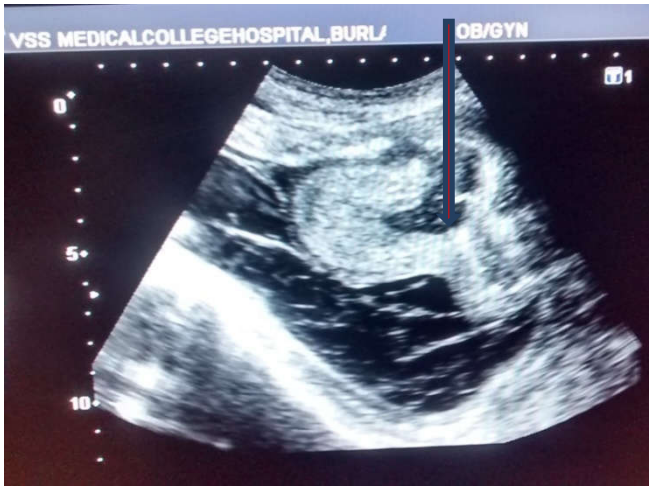

Figure 1, A defect on the anterior wall of uterus of size 3 cm with hypoechoic collection inside the uterus and in the pelvis. Arrow is pointing towards the defect

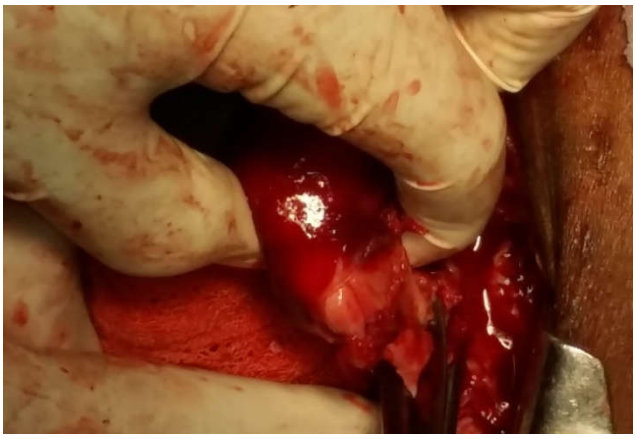

Figure 2. A defect on the uterine wall with index finger is kept inside the defect

As there was grossly devitalized infected wound margin which was impossible to repair Subtotal hysterectomy was done. Peritoneal lavage was done with normal saline. After the operation, the patient was transferred to the intensive care unit, where she stayed for 2 days. Later on, she had satisfactory recovery and was discharged 7 days later. The gross pathologic finding revealed a sutured wound perforation over the anterior Uterine scar defect measuring about 4.0 cm in length and the uterus was filled with necrotic material. The microscopic finding revealed uterine transmural necrosis accompanied by focal acute suppurative inflammation. We also investigated the patient to rule out tuberculosis. The acid-fast stain was negative. There was suture granuloma which suggested dehiscence of a caesarean section wound. Patient was discharged in a good condition after 14 days of surgery.

DISCUSSION

Although uncommon, postpartum caesarean scar dehiscence (CSD) or rupture is a life-threatening condition requiring immediate attention and treatment. According to previous reports, postpartum CSD tends to occur in a scarred uterus with coexisting infection such as chorioamnionitis, endometritis which may result in abscess formation (Diaz *et al*.). Pelvic abscess following delivery usually results from under treatment or delayed treatment of endometritis. These Patients usually have persistent pyrexia, abdominal pain, and foul smelling discharge despite treatment. In our patient we have all these symptoms despite treatment at multiple hospitals. The causative agents are anaerobic bacteria and aerobic Gram negative bacilli. Besides this infections with Streptococcus and Staphylococcus aureus have been reported indicating the wide spectrum of infection possible in such circumstances (Kaundinya 2015). In our case the pus culture & sensitivity revealed E.coli for which appropriate antibiotic was started. These patients usually have features of septicemia like high grade fever, tachycardia, and tachypnoea with lower abdominal pain and possible signs of peritonitis depending on the spread of abscess as found in this case. Urinary symptoms may be there due to associated urinary tract infection or compression of bladder neck by the pelvic abscess. MRI is the investigation of choice for the diagnosis of CSD. But where this facility is not available either transvaginal pelvic ultrasound or sonohysterogram can be a good alternative (Royo*et al*.). On USG there is a defect over the uterine scar and this sign is variously described as niche or isthmocele or dehiscence by Monteagudom *et al*., 2001, Gubbini *et al*., 2008 and Regnard *et al*., respectively. CECT scan of abdomen and pelvis is also a good option in doubtful case. We did an USG and CECT scan to diagnose the case. Exploratory laparotomy is the treatment of choice for fulminating CSD (Maldjian *et al*., 1999, Humar *et al*., 2003; Rivlin *et al*., 2004). Many a time because of infected margin it is difficult to preserve the uterus& hysterectomy is the only option we have left behind. As it happened in our case hysterectomy was carried out to save the mother& to remove the infected, necrotic foci of tissue. There are also few case reports of conservative management with CSD (Rivlin *et al*., 2004). In some young patients repair of CSD wound can be considered, with risk of recurrent uterine scar rupture to be explained to the patients (Donnez *et al*., 2008). In conclusion the best thing to prevent CSD is to take steps to reduce post-operative wound infection. These may be like use of prophylactic antibiotic within 1 hour of surgery, clipping of hair over the incision site, use of aseptic technique, proper closure of uterine incision and last but not the least closure of subcutaneous space of more than 2 cm. so that this dreaded complication can better be avoided.

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