

CASE REPORT

Puerperal Sepsis with Uterine Scar Dehiscence after Cesarean Section: A Rare Complication

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ABSTRACT

There has been an increase in the rate of cesarean section performed worldwide recently with a parallel increase in associated complications. Uterine wound dehiscence and pelvic hematoma with abscess collection is a very rare complication of cesarean section. Frequency of uterine dehiscence is between 0.06% and 3.8%.¹ Postoperative pyrexia may result from various causes, pelvic abscess being a very rare one, occurring in <1% of patients with postcesarean endometritis.² If uterine dehiscence leads to severe infection, laparotomy should be performed.³⁻⁵ During laparotomy, conservative resuturing after debridement can be chosen, but in the presence of marked wound infection, endometriosis and/or intra-abdominal abscess, hysterectomy should be considered. A high index of suspicion with appropriate investigations can highlight such problems for early treatment and cure with the least morbidity and mortality.

Keywords: Dehiscence, Pelvic hematoma, Puerperal sepsis, Uterine scar.

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INTRODUCTION

Cesarean section is one of the most commonly performed operations in women worldwide, with a gradually increasing associated complications. Like other major operations, cesarean section is often complicated by surgical site infections (SSI) which could increase morbidity, the length of hospital stay, and hospital costs. These complications include infection and dehiscence, hemorrhage, and hysterectomy in

the short term, as well as long-term problems such as uterine scar dehiscence, placental adhesion anomalies, chronic pelvic pain, pelvic adhesion, and menstrual disorders.⁷⁻⁹ Estimates of the postcesarean section SSI rate range from 7–20%, depending on obstetric variables and criteria used to diagnose the infection. Development of pelvic abscess is a rare complication following cesarean section that occurs in <1% of postpartum endometritis patients, corresponding to <0.1% of all cesarean section deliveries. This particular complication often creates a diagnostic dilemma, causes significant maternal morbidities, and requires complicated and varied treatment approaches ranging from radiological imaging-guided aspiration of pus to laparotomy and even hysterectomy. In this case report, we present a case of a patient who had wound infection post LSCS surgery and features of early sepsis.

CASE DESCRIPTION

The patient was 27-year-old primiparous woman who had taken treatment for infertility for 3 years presented in our institute as a case of 37 weeks twin pregnancy in labor with both twins in breech presentation with pre-eclampsia. Two hours later, a transverse lower segment cesarean section was performed. The uterine incision was closed in two layers using polyglactin no. 1 suture. Her preoperative hemoglobin was 7.2 g/L and after 48 hours of surgery, her hemoglobin concentration was found to be 5.8 g/L, so 3 unit blood was transfused. Her postoperative course remained clinically stable with normal vital signs, a healing incision, and normal lochia and no active bleeding. She was discharged on the twelfth postoperative day after complete stitch removal. At the time of discharge, her stitch line was healthy and hemoglobin was 9.4 g/L. At 21st postoperative day she presented with a history of recurrent low-grade fever for last 10 days and a lump in the right iliac fossa of size 10 × 12 cm which was fixed to the abdominal wall and tender with the local rise in temperature. Ultrasonography showed dehiscence of size 0.8 cm in the lower uterine segment at the site of the scar, and parietal wall collection was about 10 cm. There was a mild free fluid collection in the pouch of Douglas. The patient was diagnosed with postpartum septic uterine dehiscence. Antibiotics course of intravenous meropenem, clindamycin and amikacin were given for 3 days

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Fig. 1: Rent in uterus seen

(Fig. 1). Her fever subsided, but again she developed on and off fever after 2 days and pain in the lower abdomen. So the decision of laparotomy was made. On exploration there was a parietal wall collection (liquified infected hematoma with and localized abscess formation) was found which was incised at the most dependent area and drained. Surrounding tissues seemed very inflamed and friable. The bladder was mobilized, and scar dehiscence of size 8 mm with sloughed out margins was identified at the site of lower segment uterine incision. The uterus itself was found to be very fragile. The proposed mechanism was supposed to be puerperal sepsis which led to uterine scar dehiscence through which blood might have seepage in the surrounding area which further caused hematoma formation and necrotic tissue reaction in the uterus and the surrounding area. As an attempt to incision line resuturing was failed due to the uterus being very fragile, so subtotal hysterectomy was performed. The integrity of the bladder was confirmed by retrograde filling of methylene blue dye. Patient vitals remain stable throughout the surgery. The patient received 2 unit of packed red blood cells each on the first and second postoperative day. Her postoperative period was uneventful. She was kept on antibiotic prophylactic support. She was discharged on the 11th postoperative day after complete stitch removal and remained well thereafter.

DISCUSSION

Puerperal sepsis after a cesarean delivery is a rare complication associated with SSIs, including wound complications as wound hematoma, seroma, infection, dehiscence, necrotizing fasciitis and pelvic abscess with or without endometritis which may further lead to uterine scar dehiscence. A pelvic abscess is a rare cause of postpartum fever; its incidence being less than 1% of patients undergoing obstetrics and gynecology

procedures.¹ The location of abscess can be either in a posterior cul-de-sac, anterior lay, between the uterine wall and urinary bladder or in the broad ligament. The causative agents are anaerobic bacteria and aerobic gram-negative bacilli. When wound infection develops within 48 hours, the offending organisms usually are groups A or B-hemolytic Streptococcus. Other common pathogens involved in wound infections are *Ureaplasma urealyticum*, *Staphylococcus epidermidis*, *Enterococcus faecalis*, *Staphylococcus aureus*, *Escherichia coli*, and *Proteus mirabilis*.^{2,3} Other reported risk factors for SSI and consequently uterine dehiscence chorioamnionitis,⁴ maternal comorbidities (American Society of Anesthesiologists class of 3 or greater), body mass index >30 or 35 kg/m²,^{5,6} corticosteroid use,^{7,8} subcutaneous tissue thickness >3 cm, no antibiotic prophylaxis,⁹ pregestational diabetes^{10,11} hypertensive disease/preeclampsia,⁸ duration of labor >12 hours, nulliparity,¹² twin gestations,^{13,14} premature rupture of membranes, gestational diabetes,¹⁵ blood loss (increased for every increase in blood loss of 100 mL),¹² incision length >16.6 cm,¹⁶⁻¹⁹ and an incision made too close to the relatively avascular cervical tissues which often lead to necrosis of the angles of the wound. In our case-patient was nullipara with twin pregnancy with preeclampsia and no other associated comorbid condition could be identified. In cases where wound dehiscence is described, the incision may appear healthy or necrotic. In our case necrotic tissue reaction at scar site was present. Some reports describe dehiscence of cesarean scar associated with endometriosis and in some reports without associated Endometriosis. Conservative and aggressive approaches have been proposed for the management of dehiscence of a cesarean scar and parietal wall collection. Conservative measures include broad-spectrum antibiotic coverage and imaging like ultrasonography, or CT scan-guided needle aspiration and blood transfusion if required. The more aggressive methods include exploratory laparotomy followed by resuturing of the incision. In many cases, resuturing is not possible because of friability of the tissue, or due to uterine involution, there may not be enough tissue in the lower uterine segment to allow repair. In our patient's case due to the excessive friability of uterus and surrounding tissue attempt of resuturing could not be made and subtotal hysterectomy was done.

CONCLUSION

Hereby we concluded that in postcesarean cases with puerperal sepsis and uterine scar dehiscence if the patient is not responding to conservative measures then the decision of exploratory laparotomy should be taken without any delay to avoid various associated morbidities.

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