CASE REPORT

Postpartum Infection can be a Disaster

Shama Chaudhry[1], Rubina Hussain[2]

ABSTRACT

Endometritis is the most common infection that occurs postpartum. Postpartum endometritis is tenfold to 20-fold more common among women who delivered by cesarean section than women who delivered vaginally. It can present with puerperal pyrexia, abscess formation & rarely rupture of uterus. Reported risk factors for dehiscence of the lower segment uterine scar following CS are multiparty, infection, and an incision placed too low in the lower uterine segment. The case presents a report of a 34 year old female Para 3+0 who was presented in emergency with high grade fever and abdominal pain. She undergone a caesarean delivery 9 days prior to presentation in a private clinic. Due to infection her uterus was found to be ruptured on exploratory laparotomy which is reported very rarely. Uterus was irreparable so obstetrical hysterectomy was done &patient was kept in ICU.

KEY WORDS: *Endometritis, Obstetrical Hysterectomy, Chorioamnionitis.*

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INTRODUCTION

The timing of spontaneous cesarean uterine wound dehiscence or rupture usually occur during pregnancy or during labor in a scarred uterus. By contrast, postpartum cesarean uterine wound dehiscence or rupture is very rare. Although uncommon, postpartum cesarean uterine wound dehiscence or rupture is life-threatening. According to previous reports, postpartum cesarean uterine wound dehiscence or rupture tends to occur in a scarred uterus with coincident infection (such as chorioamnionitis, endometritis, abscess formation). In these reports, abdominal pain and fever are common symptoms.[1, 2]

CASE

A 34 year old female Para 3+0 was presented in emergency with high grade fever and abdominal pain. All her deliveries were by caesarean section and last delivery by caesarean section was 9 days back in a private clinic. Her caesarean section was uneventful & she did not had intra or postpartum haemorrhage, She denied any premature rupture of amniotic membranes. She developed high grade fever not associated with chills and severe intermittent colicky pain at uterine site on 2nd postoperative day. Her primary consultant associated pain with constipation and discharged her from hospital on the same day on antibiotics & laxatives.

On 8th post-operative day she was diagnosed as having fever due to typhoid on the basis of positive typhi dot IgG. She was given antibiotics but her condition deteriorated and admitted at tertiary care hospital.

She was fully conscious at the time of admission there .Her blood pressure was 130/70, pulse 100/ minute and temperature was 100^{0} F. She was slightly pale looking. Abdomen was soft but tenderness present at fundus. Uterus was 16-18 weeks size which was sub involuted. Gut sounds were audible. On per vaginal examination cervical os was close and lochia was present. Adnexa were not palpable or tender. High vaginal swab was taken.

Her haemoglobin was 9.8gm/dl. Total leucocyte count was 23 x 10^{9}/L & neutrophils were 90%. In electrolytes potassium was 3.3 M Eq/L & bicarbonate was 16 M Eq /L. Urine detail report showed leucocytes 15 & bacteria numerous. Ultrasound pelvis showed enlarged uterus measuring 11.6x5.5x5.8cm with endometrium 2.2 cm containing fluid. A septated area was seen anterior to the uterus measuring 7.2x3.2cm. C.T scan showed bulky uterus showing widened endometrial canal measuring2.2 cm.A localized defect in lower anterior uterine wall at the site of caesarean section. An organized collection anterior to uterus measuring 9.3x2.5x7.0 cm communicating with endometrial canal was consistent with uterine rupture.

Figure 1: Ultrasound pelvis showing dilated endometrium containing fluid measuring 2.2 cm. A septated area was seen anterior to the uterus measuring 7.2x3.2cm.

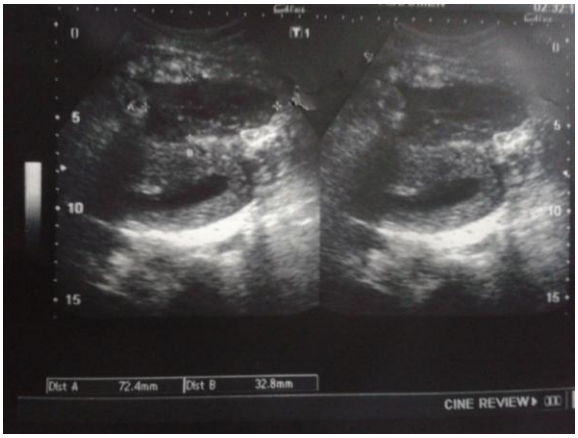


Figure 2: On laparotomy uterus was found ruptured from lower segment scar & also a longitudinal rent running from fundus to cervix with necrotic edges and pus coming out.

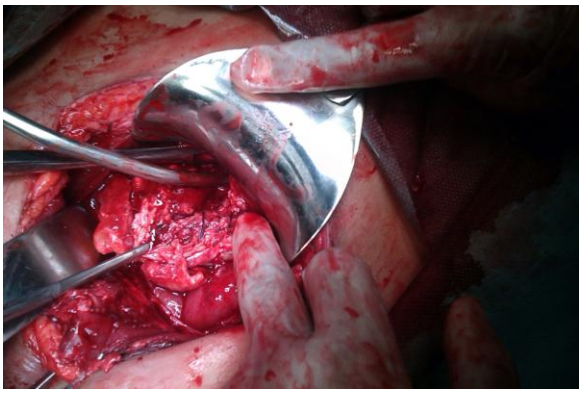
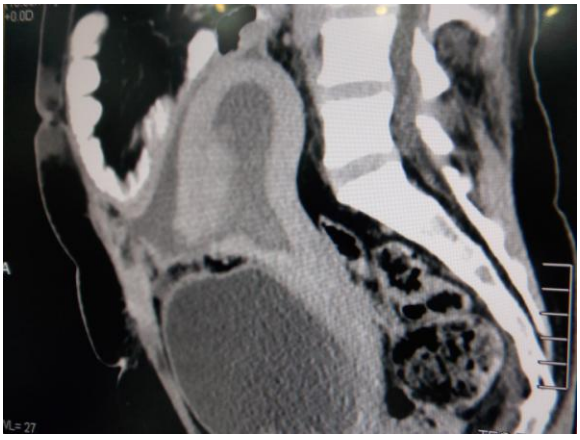


Figure 3: CT scan showing bulky uterus showing widened endometrial canal measuring2.2 cm.



A localized defect in lower anterior uterine wall at the site of caesarean section. An organized collection anterior to uterus measuring9.3x2.5x7.0cm communicating with endometrial canal

An exploratory laparotomy was done. Lower segment scar was found open and also there was a rent on anterior wall of uterus from fundus to cervix and white purulent pus was coming from rent and also covered entire uterus which was sent fore culture. Bladder was high. Uterus was very fragile unable to repair so obstetrical hysterectomy was done after mobilization of bladder with difficulty. Ovaries were conserved. Drain was left. She was transfused 3 units of PCV and 6 units of FFP. Postoperatively she was kept in ICU on broad spectrum antibiotics. Pus culture was positive for Escherichia coli. She recovered well and became afebrile.

DISCUSSION

Endometritis is the most common infection that occurs postpartum. The incidence of postpartum endometritis has been reduced by the widespread use of prophylactic antibiotics. The incidence following cesarean section has dropped from 50% to 90% without antibiotic prophylaxis to 15% to 20% with prophylaxis.[3] However, infection still occurs in 10% to 20% of patients who are given prophylaxis, as well as in the large number of women who do not receive prophylaxis, so it is apparent that infection still occurs in this era of prophylaxis. In addition, the effect of antibiotic prophylaxis on serious infection seems to be minimal, in part because prophylaxis apparently has less impact on the development of serious infection than on post-operative fever and in part because a large number of women who develop serious infection have insufficient risk factors to warrant prophylaxis. Many of the most serious infections are due to unusual organisms that seem to cause infection by chance more often than by the presence of predictable risk factors. At the same time, changes in obstetrical practices continue to increase patient risk for infection. Cesarean sections account for an ever-increasing proportion of deliveries; post-partum endometritis is tenfold to 20-fold more common among women who delivered by cesarean section than women who delivered vaginally.[4]

Early postpartum endometritis is usually diagnosed on the basis of a temperature of 38.5°C or higher in the first 24 hours or 38°C or higher for 4 consecutive hours beyond the first 24 hours from delivery. Uterine tenderness is expected because most patients will have both a uterine and an abdominal wound from the cesarean section. Since wide variations occur in the degree of uterine tenderness, the finding of uterine tenderness is not a precise guide to establish whether or not uterine infection is present. Some organisms, particularly streptococci, may produce little or no uterine tenderness. Careful physical examination will usually reveal signs of peritonitis with an ileus and rebound tenderness in both upper and lower quadrants of the abdomen. It is important during the physical examination to exclude other sources of fever, particularly from wound, intravenous line, or lung infection.[5]

Cultures from patients with postpartum endometritis typically recover a wide variety of facultative bacteria, including group B streptococci, other facultative streptococci, Gardnerella vaginalis, and Escherichia coli, and a wide variety of anaerobic bacteria, including Bacteroides and Peptostreptococcus species. Blood cultures recover similar organisms from approximately 15% to 25% of febrile patients.[6] Bacteremia per se does not predict the severity or the course of infection, although the isolation of certain virulent organisms can be predictive of severe infection. Despite the high frequency of positive blood cultures, young, otherwise healthy patients rarely develop septic shock.[7]

The most common causes of obstetric hysterectomy are atonic PPH, rupture uterus and puerperal sepsis. The organisms which

cause puerperal sepsis include staphylococcus aureus and streptococcus pyogenes (Group A).[8] Puerperal sepsis occurs in 1-8% of all deliveries. It can occur following normal vaginal deliveries or caesarean section. Puerperal sepsis is infection of genital tract after child birth and is a major cause of puerperal fever. The specific targets of infection are endometritis, metrophlebitis and peritonitis. Pyometra (collection of purulent material in the uterus) if complicated and the infected contents are released into the peritoneal cavity, where the spill may remain localized within the pelvis or disseminate throughout the cavity.[9]

Thus a variety of clinical presentation may result, ranging from pelvic mass to peritonitis with shock. Regardless of the clinical presentation, it does necessitate early surgical exploration and broad spectrum antibiotic therapy.[10] In our case aggressive care and with early surgical intervention patient was saved.

Reported risk factors for dehiscence of the lower segment uterine scar following CS are multiparity, infection, and an incision placed too low in the lower uterine segment. Incisions that are made too close to the relatively avascular tissue of the cervix lead more often to necrosis of the angles of the wound. Where dehiscence is described, the incision may appear healthy or necrotic.Some reports describe dehiscence of a CS scar because of severe endomyometritis. Others describe patients without clinical endomyometritis.[1]

Postpartum cesarean uterine wound dehiscence or rupture tends to occur in a scarred uterus with coincident infection (such as chorioamnionitis, endometritis, abscess formation). In these patients, abdominal pain and fever are common symptoms which should be given consideration.

REFERENCES

[1] Wagner MS, Bédard MJ. Postpartum uterine wound dehiscence: A case report. J Obstet Gynaecol Can 2006; 28(8): 713-715.

[2] Waseem M, Cunningham-Deshong H, Gernsheimer J. Abdominal pain in a postpartum patient. J Emerg Med 2011; 41(3): 261-264.

[3] Swartz WH, Grolle K. The use of prophylactic antibiotics in cesarean section, a review of the literature. J Reprod Med 1981; 26(12): 595-609.

[4] Eschenbach DA, Wager GP. Puerperal infection. Clin Obstet Gynecol 1980; 23(4): 1003-1037

[5] Duff WP, Gibbs RS, Blanco JD, St Clair PJ. Endometrial culture techniques in puerperal patients. Obstet Gynecol 1983; 61(2): 217-222.

[6] Rosene K, Eschenbach DA, Tompkins LS, Kenny GE, Watkins H. Polymicrobial early postpartum endometritis with facultatively anaerobic and anaerobic bacteria, genital mycoplasmas and Chlamydia trachomatis. J Infect Dis 1986; 153(6): 1028-1037.

[7] Gibbs RS, Jones PM, Wilder CJ: Antibiotic therapy of endometritis following cesarean section: Treatment successes and failures. Obstet Gynecol 1978; 52(1): 31-37.

[8] Nathan L, Peters MT, Ahmed AM, Leveno, KJ. The return of life threatening Puerperal sepsis caused by Streptococcus pyogenes (Group A). Am J Obstet Gynecol 1993; 169(3) : 571-572.

[9] Parkinson DJ, Alderman B. Spontaneous rupture of the uterus associated with pyometra. Postgrad Med J 1985; 61(711): 73-74.

[10] Palep, et al. An unusual case of pyometra. Bombay Hosp J 1997; 39: 1.