A POSTPARTUM UTERINE DEHISCENCE IN A PREGNANT WOMAN WITH BRUCELLOSIS: A CASES REPORT

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INTRODUCTION

Uterine Dehiscence (UD) is a rare complication and very dangerous complication of cesarean section (CS). Brucellosis is a threatening infection in pregnant women with severe obstetrics outcomes such as spontaneous abortion, premature delivery, intrauterine infection. We presented a case with preterm delivery with continuing high fever due to uterine fascial dehiscence after CS, who were infected to brucellosis.

CASE: A 26-year-old woman with gravidity 1, referred to the obstetrical department at 30 weeks of gestation due to Preterm Premature rupture of membranes (PPROM). After vaginally sonography, the patient underwent emergency CS due to fetus FHR drop and umbilical cord prolapse. From second day after CS, the patients fever increased and Doppler sonography shows low fluid and hematoma in the uterus and evidence in favor of a lesion collection that was evacuated with laparotomy and uterine fascial dehiscence was detected. Moreover, wound debridement conducted and during laparotomy the adhesions were released. The Wright-Coombs 2ME test showed she was infected to brucellosis.

CONCLUSION: Uterine fascia dehiscence in lower uterine segment incision is a rare but is a potentially dangerous for mothers. However, preterm deliveries due to PPROM and high uncontrolled fever after CS, are conditions that practitioners should considering the uterine dehiscence to their differential diagnoses. Nevertheless, the occurrence of dehiscence due to brucellosis infection is questionable and require more evaluation.

KEY WORDS: Uterine dehiscence, Fascia, Cesarean section, Brucellosis, Premature rupture

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INTRODUCTION

The incidence of cesarean section (CS) operation is increasing in all countries especially in developing countries as the most common in obstetrics surgery[1]. Due to the CS operation, late scar dehiscence may occur in some women and may lead to uterine rupture in future pregnancies[1, 2]. Partial or complete Uterine Dehiscence (UD) following endomyometritis (puerperal sepsis) is a rare complication of lower segment cesarean section (LSCS) delivery[3]. This rare occurrence is very dangerous and potentially life threatening complication of CS with limited literature[4, 5].

Preterm delivery, tertiary cesarean delivery or higher and short inter-delivery interval of lower 24 months are the most important cases of UD.[2] Moreover, heavy vaginal postpartum hemorrhage(PPH), abdominal pain and pelvic pain as early as 11 days to as late as 12 weeks after surgery are the most common symptoms of UD in other reported cases.[6, 7]

Brucellosis is a threatening infection in pregnant women with severe obstetrics outcomes such as spontaneous abortion, premature delivery, intrauterine infection[8-10] We experienced a case with continuing high fever due to uterine fascial dehiscence after preterm delivery by CS, three days after the operation without any PPH, but who were infected to brucellosis.

CAUSE HISTORY

The patient was a 26-year-old gravida 1 woman, referred to the obstetrical emergency department at 30 weeks of gestation due to Preterm Premature rupture of membranes (PPROM). She had no symptoms of dizziness, nausea, vomiting, fever, purulent discharge, edema, and foot varicose veins. She has no history of taking a specific drug or underlying disease, with a 4 years of infertility history, but the current pregnancy was automatic. She was satisfied from the fetus movements and she report consumption of local (unpasteurized) dairy.

In the first day, the vital signs after admission was BP:95/60, PR=92, RR=19 and T=36.5°. The clinical examination showed the abdomen is soft and without guarding. Lungs were normal and vesicular. She has not uterine tenderness and in uterine examination by speculum, the cervix was closed. The fetus FHR was 135. Therefore, after clinical examinations Ampicillin (AMP, 2gr; QID-IV, no discharge), Azithromycin (Cap, gr P.O, Stat), Betamethasone (AMP,12mg I.M Stat), Magnesium sulfate (2 gr, Stat for 12 hrs.) and NST +Toco (daily) was prescribed for patient.

During the fetal ultrasound on the first day of hospitalization a cephalic embryo, amniotic fluid= 132, and a posterior placenta was observed in uterine. The fetus weight was 1690 and was in 90th percentile of growth curve. The conducted biophysical was 10/10.

During the second and third days, the vital symptoms were stable and no fever was detected. In the second day after admission, in trans-vaginal sonography showed the length of the cervix was 23mm and the cervix path was open and qualified. In third day, due to FHR drop, fetal heart failure and umbilical cord prolapse, the patient underwent emergency cesarean section (CS). During CS, first the Pfannestiel incision conducted on abdomen and horizontal incision in lower segment of uterine applied. But due to back down transverse of fetus, the incision changed to T incision to achieve the fetus. The CS outcome was a fetus with PH=7.26, PCO2=50.1, PO2=15, HCO2=22.5, BE-CCF= -4.8, BE-B=-5.2, weight 1700gr and Apgar is first and 5 minutes was 7 and 9, respectively. Due to high risk of mother following cesarean, Ampicillin (2gr, QID), Gentamicin (80gr, TDS) and Clindamycin (900, TDS) prescribed for 48 hrs.

The first day after CS, the patient's general condition was good. The bandage site was dry and vaginal bleeding was normal and the uterus is contracted. Nevertheless, she has not defecation. On the second day after the CS, the patients had defecation, but at 11pm, her fever was 37.9 and she had tachycardia. On the third day after the CS, due to high fever, PCR Covid 19 and without contrast CT from

abdominal/pelvic was requested. Moreover, Apotel (Amp), Enoxaparin (Amp, 400mg BD), Pentazole (Tab, 20mg BD) is ordered.

In forth day after CS, infectious disease specialist replaced Vancomycin (AMP, 4.5 gr, QID) and Tasosin (AMP, 1 gr, BD) with Ampicillin (2gr, QID), Gentamicin (80gr, TDS) and Clindamycin (900, TDS). In addition, blood culture showed the proteinuria and PCR Covid-19 test were negative and the CXR did not show lung perfusion involvement. In forth day after CS, Doppler sonography did not show evidence of deep vein thrombosis (DVT) and pelvic artery thrombosis. Moreover, low fluid and hematoma in the uterus and evidence in favor of a subcutaneous lesion collection in 20 × 22 × 48 diameters was seen. The vital sign was BP:116/81, PR:130, RR:21, and T=39.3°. Moreover, CRP was higher 1200 and leukocytosis (WBS=12500) and neutrophil was 80%. Five days after CS, based on the medical commission, the patient was transferred to the operating room and subcutaneous lesion collection was evacuated with laparotomy. Uterine fascial dehiscence was not seen and a little post operation inflammation was seen at the site of CS. The culture of lesion collection showed positive E-Coli and therefore, Tasocin was hold but vancomycin, Meropenem (1gr, IV, TDS), Pantazol (Amp, 40mg) and Enoxaparin (40ml Daily) were prescribed.

After operation at fifth day and 10th days after CS all things was normal. On the 11th day after CS, a purulent discharge was observed during the washing of the wound and due to a 37.9 degrees' fever, the infection probability at the operation site or an abscess was raised. Therefore, a biopsy was then taken from the wound tissue for culture and Wright and Coombs 2ME test was requested. The patient, went to the operating room again due to high fever and for debridement of dehiscence. She underwent NPO in last night and transferred to the operating room by diagnosing infection of CS wall without purulent discharge. Laparotomy was performed and during laparotomy the dehiscence were released and then she was transferred to the ICU.

During washing and debridement in the operating room, we noticed fascia dehiscence, in which the fascia opened and we entered the abdominal cavity, and uterine dehiscence was completely seen in the T-incision. Debridement and repair of the uterus were performed and the uterus was preserved. Therefore, fascia and infection debrided and fascia was repaired, then drain was implanted and cutaneous and subcutaneous of skin maintained open. Then, two units of pack cells, 2 units of FFP and Apotel (Amp) and continuing vancomycin and Meropenem (1gr, IV, TDS) is prescribed.

On 15th day after CS, the wound site was dry and wound culture for negative Coagulase Staff of uterine fascia dehisce were negative. Vancomycin discharged and Linezolid started and Meropenem Continued. Laboratory results showed that Wright (1/1280) and Coombs 2ME (1/1280) tests was positive and brucellosis diagnosis confirmed. Therefore, the brucellosis treatment started with tetracycline orally (500 mg, every 6 hours for 8 weeks) and gentamicin (3-5 mg/kg for 2 weeks). Finally, at 19th day after CS, the patient discharged by continuing medication and antibiotic therapy and outpatient follow-up. Finally, resection of the uterine defect and re-constitution of the uterine wall was successfully achieved and brucellosis treated.

DISCUSSION:

Dehiscence of a cesarean scar incidence varied between 0.3–1.9% of all cases and uterine hemorrhage did not occurs in majority of cases[3,6,7]. Therefore, other symptoms such as infection in wound and dehiscence sites should be considered in evaluation of postpartum pain after CS. In addition, coinfection by brucellosis of other microbial agents should be considered in differential diagnosis. Other studies demonstrated that multiparty, infection, and an incision placed too low in the lower uterine segment are the risk factors for dehiscence in LSCS[3].

Infections and subsequent spillage of pathogenic organisms into the peritoneum are the cause of weakening in uterine scar tissue and occurred the peritonitis or abscess formation. Similar consequence observed in the myometrium during LSCS, which the gradual spread of intra-uterine pathological organisms into the peritoneal cavity is occurred and caused facial dehiscence[4,11]. Among diagnostic methods, 3D ultrasound is better method for detection of dehiscence than routine transvaginal ultrasound that is applicable for fluid collection or hematoma in the scar area[6].

The uterine culture in current case, did not show any microbial infection, but the wound culture was positive twice that E. coli in the first time and negative Coagulase Staff in second time. Therefore, she received a broad spectrum antibiotic cover to healing their wound and control her fever. However, due to long time fever, and history of unpasteurized dairy, premature delivery and intrauterine infection brucellosis tests were checked. However, other articles showed that delayed cesarean wound healing may be due to infection[7].

According to literatures multiparty, infection, and an incision placed too low in the lower uterine segment are related risk factors for dehiscence of the lower segment uterine scar following CS[3]. In current case, uterine fascia dehiscence may be related to brucellosis infection and the persistent fever despite adequate antimicrobial therapy was the cause of delayed wound healing. Nevertheless, in this case, due to antibiotics prophylaxis after CS, the sepsis did not occur, but the brucellosis infection may be the main cause of high fever and delayed healing. Brucellosis as a common and threatening infection in pregnant women could cause localized body system complications, osteoarticular system and severe obstetrics outcomes such as spontaneous abortion, premature delivery, intrauterine infection or intrauterine fetal death (IUFD) in pregnant women with brucellosis[8-10]. The same condition conducted in current patients and our cases pregnancy terminated at 29th week of gestational age. Nevertheless, the fetus was not infected to brucellosis and was normal.

In the presented cases the laparotomy conducted two times and in the first time the subcutaneous lesion collection was evacuated at 4th day after CS and another laparotomy operation was conducted at 11th day after CS and adhesions were released. Nevertheless, the uterine of our case was preserved, but the consequences of this complication is unknown for a future pregnancy.

Uterine scar separation should be executing in patients with a fascial dehiscence after CS delivery and patients should be counseled for hysterectomy at laparotomy time for especial situations.[12] Moreover, transvaginal sonography of the scar region is necessary in patients with CS history to screening the latent scar dehiscence in combination with uterine wall thinning before planning further pregnancy. In cases who were suspected to uterine dehiscence, combined laparoscopic - vaginal or vaginal sonography is useful for repair the defect.[1]

CONCLUSION:

Uterine fascia dehiscence in lower uterine segment incision is a rare but is a potentially dangerous for mothers. This outcome should be considered in patients with history of CS who were deciding for future pregnancy. However, preterm deliveries due to PPROM and high uncontrolled fever after CS, are conditions that practitioners should considering the uterine dehiscence to their differential diagnoses. Nevertheless, the occurrence of dehiscence due to brucellosis infection is questionable and require more evaluation.

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