



Antepartum Uterine Rupture Occurring at the Site of a Previously Repaired Dilatation and Curettage-Induced Perforation: A Case Report

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► ABSTRACT

The uterine rupture during pregnancy is a catastrophic condition resulting in both maternal and perinatal morbidity and mortality. It occurs in nearly 1% of patients with previous cesarean sections. However, uterine rupture at the site of previous iatrogenic perforation which is spontaneously healed or repaired is less reported. We present a 29-year-old woman, gravida 3 para 1, at 20 weeks of gestation with abdominal pain of right half and hemodynamic instability whose laboratory evaluations revealed severe acute blood loss but still without any signs of peritonitis. The exploratory laparotomy revealed a uterine rupture at the site of fundus at the same location of previously repaired dilatation and curettage-induced perforation contributing to extrusion of whole pregnancy product in addition to severe intra-abdominal blood loss.

Keywords: Uterine Rupture; Dilatation; Curettage; Peritonitis.

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Introduction

The uterine rupture during pregnancy is a catastrophic entity resulting in maternal and perinatal morbidity and mortality. In patients with previous lower segment caesarian sections, the risk of uterine rupture is estimated up to 1% [1,2]. With the natural potentiality of uterine perforation, occurring as the most important complication of dilatation and curettage (DandC) with incidence of 0.16% to 0.9%, for spontaneous healing without further complication, it seems relatively rational not to find any incidence of uterine rupture during pregnancy after a repaired or spontaneously healed uterine perforation of previous

DandC [3-5]. The uterine rupture dramatically presents with abnormal fetal heart beat, continuous abdominal pain and significant vaginal bleeding. In the rarity of asymptomatic patients, absence of peritoneal signs is possibly related to extrusion of product of pregnancy through the uterine rupture with intact amniotic sac and insignificant bleeding into the abdominal cavity or vaginally [1]. However, to the best of our knowledge, absence of peritonitis in severe bleeding into the abdominopelvic cavity in the cases of uterine rupture is unreported. We herein report a 29-year-old woman with uterine rupture at the site of previous repaired perforation due to a complicated DandC.

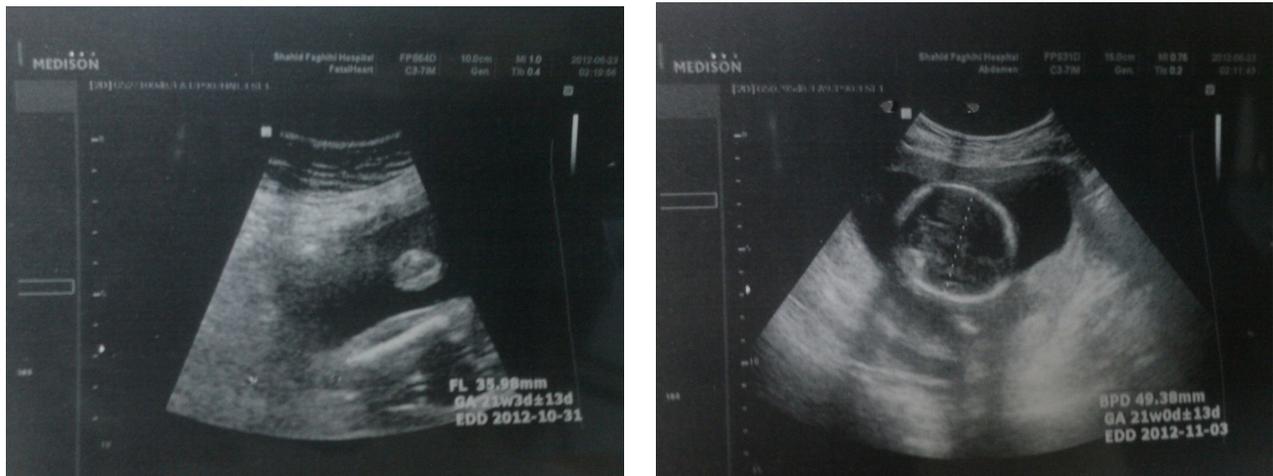


Fig. 1. Two subsequent ultrasonograms demonstrating an intrauterine pregnancy at 21 weeks of gestation.

Case report

A 29-year-old woman, gravida 3, para 1, living 1, at 20 weeks of gestation came to emergency department of our center complaining of abdominal pain of right half with mild to moderate intensity as well as episodic nausea and vomiting, low-grade fever, mild spotting and a history of no stool passing all started from 4 days ago. She had once undergone cesarean section 4 years ago due to placental abruption and fetal distress giving birth to a healthy neonate. Two years prior to current admission, she had a history of DandC for removal of tissue retained after a spontaneous abortion at 3 months of gestation. The procedure was complicated by a uterine perforation at the site of fundus contributing to a surgical repair at that time. On arrival, she was conscious but mildly anxious. Her core body temperature was 36.5°C and she was not tachypnic. The blood pressure and heart rate were 70/50 mmHg and 120 bpm respectively with orthostatic change. She had conjunctival pallor and an ejection-type systolic murmur grade III/VI was also heard on left lower sternal border. The abdominal examination revealed a soft pregnant abdomen approximately at 20 weeks



Fig. 2. Extruded fetus and amniotic sac into abdominopelvic cavity after laparotomy.

of gestation with mild abdominal tenderness of right side. No signs of peritonitis were detected. The cervix was unfavorably closed with no cervical motion tenderness. End extremities were all cold and distal pulses were not detectable. The hardly detected femoral pulse was rapid and filiform. An immediately extensive resuscitation with crystalloids and packed RBCs was started. CBC yielded WBC 29100/mm³, Hg 7 gr/dl and platelet count of 294000/mm³. The coagulation tests were all normal. In the abdominopelvic sonography, a single alive fetus with cephalic presentation and BPD 49.38 mm was demonstrated (Figure 1). Therefore, the gestational age was estimated about 21 weeks. The amniotic fluid index was adequate and a posterior placenta previa was noted. The fetal heart rate was constantly 85 bpm. The ultrasonogram also revealed mild to moderate free fluid in the abdominopelvic cavity. Due to unresponsiveness to our early resuscitation, the patient underwent exploratory laparotomy. By opening the abdominal wall via a vertical incision and entering the abdominal cavity, moderate amount of fresh blood and 500 cc clot was suctioned. The uterus was detected to be ruptured in fundal-anterior part and fetus and amniotic sac were extruded into the abdominal cavity (Figure 2). They were taken out and uterus was repaired in 3 layers. The total blood loss was estimated to be more than 2 liters. No complication was occurred during postoperative hospital course and she was discharged after 4 days.

Discussion

Dehiscence of a uterine scar during pregnancy occurs most commonly after cesarean sections. The second common cause is myomectomy [6]. Scar of previously repaired uterine perforation which occurs as a complication of minimally invasive procedures such as DandC is not even considered as a minor cause of uterine rupture during pregnancy.

The risk of uterine rupture in the presence of a defective scar is related to its location and the degree of thinning of the lower uterine segment as measured by ultrasound. The overall risk for a corporeal scar to be ruptured is 4% to 19%. It ruptures more easily compared with a lower segment scar [1].

The main complication of minimally invasive interventions including DandC for first trimester surgical abortion is uterine perforation mostly in fundus associated by a retroverted uterus, nulliparity, falsely less-estimated gestational age and provider inexperience [4,7]. As it was mentioned, the incidence of uterine rupture at the site of a spontaneously healed or repaired iatrogenic uterine perforation is not obvious.

In the handful of rare cases reported as asymptomatic uterine rupture in the literature, the possibility of peritonitis absence is considered due to extrusion of the whole pregnancy through the uterine scar without leakage of amniotic fluid and minimal blood loss probably as a consequence of predominant healing of a uterine incision by scar formation rather than myometrial regeneration [8]. However, in our case with acute drop in hemoglobin level and pre-shock state due to moderate to severe intra-abdominal blood loss, we expected to have at least minimal signs of peritonitis. Absence of

peritoneal signs despite significant bleeding into the abdominopelvic cavity is contrary to the possible reason mentioned by Shipp TD *et al.* for asymptomatic state. What happens here to prevent complete presentation of chemical peritonitis is not clear. It seems that there is discordance between symptoms. Another interesting point in this case was her first presentation with abdominal pain of right side. As a new abdominal pain especially in the right half may masquerade acute appendicitis, she was first admitted with this impression. However, the absence of associated symptoms and signs as well as ultrasonographic study made its probability less. The ultrasonogram in our case showed an alive intrauterine pregnancy with moderate free fluid in the abdominopelvic cavity. The unsuccessful sonographic detection of ruptured uterus is possibly due to early performing the modality which was probably before complete extrusion of fetus and amniotic sac through the ruptured site.

In conclusion, the uterine rupture may mimic a large variety of conditions presenting by acute abdomen or even may have minimal symptoms and signs despite what has really occurred. Neglecting this point may contribute to further irreparable catastrophes.

Conflict of Interest: None declared.

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