ASIAN JOURNAL OF PHARMACEUTICAL AND CLINICAL RESEARCH

INNOVARE ACADEMIC SCIENCES
Knowledge to Innovation

Vol 15, Issue 3, 2022

Online - 2455-3891
Print - 0974-2441

Case Report

SECOND TRIMESTER UTERINE RUPTURE WITH PLACENTA PERCRETA IN PREVIOUS LOWER SEGMENT CESAREAN SCAR

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Received: 27 December 2021, Revised and Accepted: 02 February 2022

ABSTRACT

Rupture of a pregnant uterus is a serious threat to the mother's life and her unborn child. Most of the reported cases of uterine rupture in scarred uterus are due to dehiscence of previous cesarean scar or a rupture of myomectomy scar and usually occur in the third trimester. Spontaneous uterine rupture in first or second trimester is very rare. Here we report a case of second-trimester spontaneous uterine rupture with a particular emphasis on the etiological factors, discuss the course of events and difficulties in the diagnosis. The lesson learned from this case is that, although uterine rupture is very rare in the second trimester of pregnancy, it should be taken into consideration in the differential diagnosis of acute abdomen, especially if there is a predisposing factor such as previous lower segment caesarean section and fluid in the abdomen.

Keywords: Uterine rupture, Placenta percreta, cesarean scar

 DOI: http://dx.doi.org/10.22159/ajpcr.2022v15i3.43996. Journal homepage: https://innovareacademics.in/journals/index.php/ajpcr

INTRODUCTION

Uterine rupture is a rare, catastrophic event in obstetrics. It is the involvement of all the layers of the uterus including the serosa. When it occurs, it is usually associated with prior risk factors such as previous uterine scar surgery, uterine injury, trauma, abnormal placentation, or induction of labor, difficult vaginal deliveries, uterine anomalies [1,2].

Uterine rupture generally occurs in third trimester and spontaneous uterine rupture in first or second trimester is very rare. Incidence of silent rupture in literature is about 1:16000 [3]. As per another study incidence of rupture varies from 0.007 to 0.05% deliveries, depending upon whether the uterus is scared or not [1].

Presenting symptoms of uterine rupture are non-specific and can be confused with early pregnancy physiological changes such as abdominal pain, vomiting, loose motion, or increased frequency or retention of urine before signs and symptoms become more sever like bleeding per vaginum, non-reassuring fetal heart tracing, or hypotension and tachycardia secondary to hemoperitoneum. It is important for clinicians to keep uterine rupture as differential diagnosis for patients presenting in early or mid-pregnancy with vague symptoms and use of investigating modalities to accurately diagnose and treat it before threatening complications occur to either mother or baby. In this report, we will discuss the course of events, difficulties in the diagnosis of uterine rupture. Spontaneous uterine rupture in early pregnancy with a particular emphasis on the etiological factors is also discussed [4].

CASE REPORT

A 29-year-old G5P2L1A2 lady at 26 weeks Period of Gestation (POG) reported to emergency department with sudden onset pain abdomen since last 1 h at 1800 h. Pain was generalized and associated with vomiting, retrosternal burning, and aggravated by movements. No associated bleeding or discharge per vaginum. The patient was known hypothyroid and was taking Tablet Eltroxin 50 mcg a day. She was booked case, immunized, and had regular antenatal visits.

Patient was admitted before at 18 weeks POG for pain abdomen, investigated thoroughly, that time ultrasound had shown minimal free fluid in the abdomen with normal live fetus in utero. She was managed conservatively and discharged on day 7 of admission as she was asymptomatic. Patient had previous two emergency Lower Segment Caesarean section (LSCS) and two Medical termination of pregnancy (MTPs). First LSCS was done 6 years back for non-progress of labor and second LSCS was done 2 years back for Fetal growth retardation with fetal distress. Her both MTPs were surgically managed by suction and evacuation. All procedures had a history of uneventful intraoperative and post-operative period.

On examination patient had tachycardia of 100/min, pallor was present, other vitals were within limit. Abdominal examination revealed generalized tenderness, no scar tenderness, no guarding but positive rebound tenderness. Other systemic examination was essentially normal. On per, vaginal examination cervix was closed and uneffaced. Investigations showed Hemoglobin of 9.7 g%, TLC-14,700 cumm, other investigations were within normal range except hyponatremia, which was probably due to vomiting. Ultrasound showed a live fetus and no retro placental clot, free fluid in the abdomen was noted. A suspicion of surgical abdomen was kept in mind along with differential diagnosis of mid-trimester uterine rupture. Surgical opinion was taken and patient was put on broad-spectrum antibiotics for suspected spontaneous bacterial peritonitis. Uterine rupture was ruled out as ultrasound and Cardiotocography (CTG) were suggestive of live fetus.

She was transferred to intensive care unit, at 2000 h her tachycardia went up to 130/min, BP-90/70 mmHg, CTG showed sudden fetal distress and absent fetal heart rate. Ultrasound confirmed intrauterine fetal death. A clinical diagnosis of uterine rupture was done. Informed consent for emergency exploratory laparotomy and peripartum hysterectomy was taken. Midline vertical incision taken. Hemo-peritoneum of 3 liters was present. Lower segment uterine rupture with extension towards left side reaching till fundus seen. Placental tissue was seen protruding through uterine rent along with dead fetus covered with membranes in the process of expulsion was noted. Bleeding was present from raw placental area near fundus and torn uterine wall. Patient underwent peripartum hysterectomy. She was transfused three units of blood and other blood components intraoperatively and immediate post-operative period. Post-operative period was uneventful. She was discharged on the seventh post-operative day with satisfactory wound healing and hemoglobin of 9 g%. Post-operative specimen of ruptured

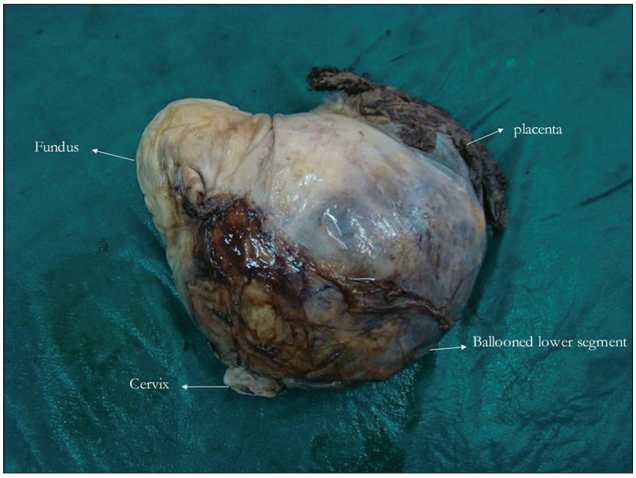

Fig. 1: Post-operative specimen of ruptured uterus showing different parts of uterus and placenta

Fig. 2: Post-operative specimen of ruptured uterus showing fetal head

uterus showing different parts of uterus, fetal head and placenta is shown in Figs. 1 and 2.

DISCUSSION

Rupture of a pregnant uterus is a serious threat to the mother's life and her unborn child. Most of the reported cases of uterine rupture in scarred uterus are due to dehiscence of previous cesarean scar or a rupture of myomectomy scar and usually occur in the third trimester. Risk increases with augmentation of labor than spontaneous labor. Most patients will present with fetal distress and pain abdomen before impending rupture [5]. Uterine rupture during first or second trimester is rare and risk factors are prior uterine surgery or scar, abnormal placentation, grand multipara, and medical induction [3,6,7]. Presenting symptoms in early trimester of pregnancy are gastrointestinal, urinary symptoms which are vague and confusing making it difficult to diagnose rare possibility of spontaneous rupture uterus. In reported case patient had risk factor of previous two cesareans. She presented to us at 18 weeks POG with symptoms of pain abdomen and presence of ascites in the abdomen and spontaneous resolution of symptoms delayed the diagnosis of impending rupture and instead other causes like acute peritonitis, acid peptic diseases, acute pancreatitis were considered.

She was at 27 weeks when presented to us with pain abdomen and multiple episodes of vomiting and retrosternal burning. Differential diagnosis of spontaneous bacterial peritonitis along with abruption of placenta and uterine rupture was considered, but ultrasound examination does not reveal retroplacental clot and there were no findings of myometrial discontinuity or placental invasion, fetal heart activity was found to be normal. However positive findings were pallor and ascites. Patient became decompensated due to ongoing bleeding in the abdomen and went into hypovolemic shock, presented by worsening tachycardia and hypotension. Finding of sudden fetal distress and subsequent intrauterine fetal demise confirmed by bedside ultrasound made the diagnosis of uterine rupture obvious. Prompt resuscitative measures taken and immediate exploratory laparotomy performed. Intraoperative findings were uterine rupture over previous cesarean scar, which is extending along left lateral wall of uterus reaching almost till fundus and fungating placenta over fundus region. Fetus along with membranes in the process of expulsion through fundal rent.

Antenatal ultrasound suggested fundo posterior location of the placenta, which was away from the anterior lower uterine segment. Finding of protruding placenta from fundal rent with active bleeding suggests probable placenta percreta with invasion upto serosa of the uterus, which may be due to previous silent injuries to fundal or posterior uterine wall during suction and evacuation causing abnormal placentation in subsequent pregnancies. In presented case both the risk factors of previous cesarean scar and morbidly adherent placenta were present, causing it to rupture spontaneously in early trimester of pregnancy. Placenta percreta is rarest among morbidly adherent placentas but may complicate pregnancies with severe hemorrhages [5]. Patient had given us warning in form of pain abdomen alongwith free fluid in the abdomen earlier, but spontaneous resolution of symptoms delayed her diagnosis by few weeks. Diagnostic laparoscopy may have helped us in early diagnosis. In present case, it was a second trimester spontaneous uterine rupture with the previous two LSCS and probable placenta percreta, a rare occurrence.

A differential diagnosis of uterine rupture was always kept in mind but due to the absence of classical signs and symptoms, it was delayed by few hours.It is likely that it was precipitated by a morbid invasion of the placenta at the uterine fundus. Uterine rupture must be considered in differential diagnoses of severe abdominal pain even in the early second trimester. Ronen *et al*. [8] also reported a case of early second trimester of placenta Accrete and uterine rupture in a lady with complicated obstetric history with initial suspect of preterm premature rupture of membranes consistent with the findings of chronic abruption oligohydramnios sequence. Her hospital course was complicated with acute abruption and category III nonreassuring fetal heart rate tracing. Fahrni *et al*. [9] also reported recently in 2020 a case of recurrence of a second-trimester uterine rupture in the fundus distant from old scars. The patient was admitted in an emergency department with acute pain abdomen and pre shock hemorrhagic state in second trimester. Authors of various such case reports thus recommend high index of antepartum uterine rupture even at an early gestational age in acute abdominal pain cases with scarred uterus.

CONCLUSION

The lesson learned from this case is that, although uterine rupture is very rare in the second trimester of pregnancy, it should be taken into consideration in the differential diagnosis of acute abdomen, especially if there is a predisposing factor such as previous LSCS and fluid in the abdomen.

ACKNOWLEDGMENTS

I acknowledge and thank to all my coauthors, and study participants.

AUTHORS' CONTRIBUTIONS

All authors have contributed to the preparation of manuscript.

CONFLICTS OF INTEREST

Nil.

AUTHORS' FUNDING

Nil.

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