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An Exceptional Case of Uterine Rupture on a Scarred Uterus Discovered Following a Late Abortion

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ABSTRACT

Uterine rupture (UR) is a life-threatening peripartum complication with a high incidence of maternal morbidity and mortality. It is quite common in the third trimester of pregnancy ranging from 1 / 8,000 to 1 / 15,000 pregnancies. Its true incidence in the first trimester is unknown as most of the reports are case reports or small series of cases. We report an exceptional case of uterine rupture at 13 weeks of amenorrhea in a 34-year-old patient with a history of a cesarean delivery 2 years ago, discovered following a late abortion due to persistent bleeding and failure of aspiration. Through this observation we would like to draw the attention of practitioners to this diagnosis, which is often overlooked in the first trimester.

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Introduction

Uterine rupture (RU), which is one of the most serious accidents that can occur during labor or in late pregnancy, contributes significantly to maternal and fetal mortality in developing countries [1]. Most uterine ruptures occur at the end of pregnancy and only a limited number of cases occur during the first or second trimester of pregnancy [2]. Its discovery in post abortion is exceptional. An untimely diagnosis and a low index of suspicion can be life threatening. Given the rarity of uterine ruptures in the first trimester of pregnancy, we present a rare case of uterine rupture at 13 weeks of amenorrhea in a 34-year-old patient with a history of a previous caesarean section with a misleading clinical picture of late abortion.

Observation

34-year-old patient, 2nd primiparous procedure, mother of a child living by cesarean section performed 2 years ago, admitted to the ELHAROUCHI maternity emergency room of the IBN ROCHD CHU in CASABLANCA in a picture of moderate abdominal pain and moderate bleeding during pregnancy not yet followed, diagnosed following a positive urine pregnancy test at home. She had not yet started the antenatal consultations (ANC) and had not performed any ultrasound. Her last menstrual date was about 3 months ago. There was no history of curettage or insertion of an intrauterine device. In addition, she had no history of smoking or drug use or abdominal trauma.

On clinical examination the patient was pale, her pulse at 120 beats / min and her blood pressure at 90/65 mmHg, the respiratory rate at 22 cycles / minute, with slight abdominal tenderness on palpation. Gynecological examination revealed moderate bleeding of endouterin origin and a slightly increased uterus. The patient spontaneously expelled a fetus without cardiac activity without expelling the placenta. The artificial delivery attempt was not possible since the cervix had closed.

A pelvic ultrasound performed revealed an enlarged uterus, the seat of enduterine material. The complete blood count showed hemoglobin at 8 mg / dl, hematocrit at 24.9 gr%, platelets at 250,000 elements / mm3, the blood group B Rh positive. Given the non-expulsion of the placenta despite the patient being placed on syntocinon, and the persistence of moderate-abundant bleeding, aspiration was required, but in view of the non-exteriorization of the material which remained attached to the operative scar with worsening of the bleeding, an exploratory laparotomy was performed without delay under general anesthesia. On surgical exploration, a transverse uterine rupture of 3 cm on the old scar with an intact serosa (figure 1). Both ovaries were normal.

Figure 1: Laparotomy revealed a uterine rupture of approximately 3 cm at the site of the previous cesarean scar

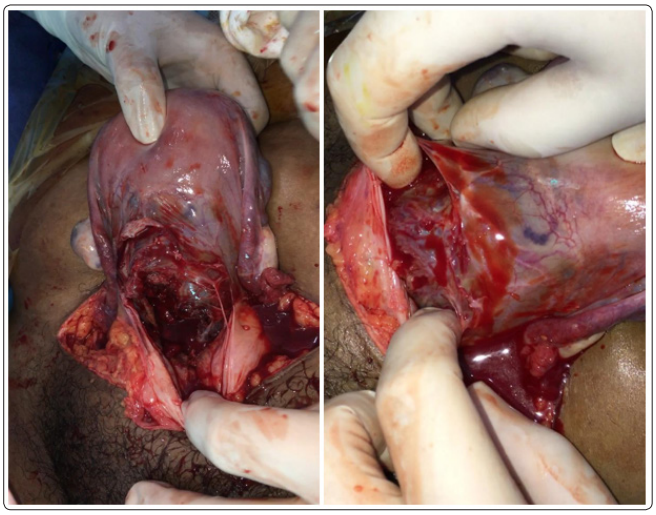

Figure 2: Approach the uterine cavity through the opening of the serosa lining the site of uterine rupture

The patient was transfused intraoperatively with 2 red blood cells then she was transferred to the postoperative care room. The postoperative hemoglobin level was 9.5 g / dl. The postoperative follow-up was simple and she was declared out on day 3 postoperatively.

Discussion

One of the main causes of obstetric hemorrhage is ruptured uterus in pregnant patients. Itis defined by a solution of complete continuity of the uterine wall as well as its serosa. The uterine lumen then communicates with the peritoneal cavity [3]. This term is often confused with uterine dehiscence, in which the integrity of the visceral peritoneum is preserved [1]. There are two types of uterine rupture (UR): traumatic and spontaneous. The aetiologies of so-called "traumatic" RU are varied and may be related to shock (direct or indirect) or obstetric maneuvers (endo-uterine maneuvers or uterine expression) [4].It can be a life-threatening event for the mother and the fetus, especially in its complete form. The incidence of uterine rupture is 1 in 4,800 deliveries in developed countries and the rupture of an unscarred uterus is 1 in 10,000 to 15,000 deliveries [5].

It can occur during pregnancy or during labor but most usually occur during labor in pregnant women with risk factors [6]. However, its incidence in the 1st and 2nd trimester of pregnancy is rare [7]. When symptoms appear early in pregnancy, the diagnosis made before laparotomy is that of late abortion [1]. The most important risk factor for either form of rupture is a previous cesarean section or other myometrial surgical incision. Other risk factors include high multiparity, trauma, irregular presentation, obstructed labor, misuse of uterotonic drugs, especially for induction of labor [8, 9].

Uterine rupture rarely occurs in an unscarred uterus. The main factor correlating with first trimester uterine rupture in unscarred uteri is uterine abnormality which, if known, deserves special attention throughout pregnancy. Rupture in this context is mainly correlated with a specific uterine abnormality, that is, a bicornuate uterus. According to the literature, bicornuate uteri show a particular vascular network between the 2 hemi-cavities, drawing the Greek letter y at the level of the midline [2,10]. One could hypothesize that this type of vascularization weakens the uterine wall, particularly at the level of the uterine fundus, where spontaneous rupture usually occurs.

The probability of rupture is higher when a combination of several risk factors is present [8, 11, 12].

A systematic review carried out by Fabiana Cecchini and allin January 2020 [2] summarized all cases of uterine rupture in the first trimester reported in the literature with a number of 76 case reports. She demonstrated that most first trimester uterine ruptures occur in a scarred uterus (69.74%) and that the three main surgeries associated with uterine wall disruption are cesarean section (67.92%), dilation and curettage (28.30%) and myomectomy (9.43%). However, a uterine rupture in the first trimester can also occur in a non-scarred uterus. This systematic review shows that there is a strong association between uterine rupture in a non-scarred uterus in the first trimester and uterine anomaly (43.48%), and a minor correlation with multiparity (17.39%) [13, 14].

At term and near term, in patients with a history of previous caesarean section, careful and close monitoring of the mother and fetus during labor may aid in its rapid diagnosis, as abnormal progression of labor, Abnormal abdominal pain, vaginal bleeding, loss of presentation station, maternal tachycardia, and fetal bradycardia are indicative factors for detecting uterine rupture [15].

However, in early pregnancy, especially without the presence of predisposing risk factors, the diagnosis may occur with latency or never be detected; leading to life-threatening complications. In addition, the signs and symptoms of uterine rupture in the first trimester are not specific [11, 12, 16]. Although the presence of an anterior uterine scar has been described as the main cause of uterine rupture, some recent studies have reported abnormal placentation (accrete, increta and percreta) as the most common underlying etiology, even in early pregnancy.

It appears that in these cases, which often occur in early pregnancy, the fundus is the most common site of rupture. It is then that in both term and short term pregnancies, most uterine ruptures occur at the site of the previous cesarean scar .

Conclusion

Uterine rupture during the first trimester of pregnancy is a rare and potentially fatal event. It appears that despite the difficulty of detecting a uterine rupture in early pregnancy, most ruptures can be repaired. The majority of studies have indicated two main causes of uterine rupture, namely an abnormal invasion of the placenta and a scar from a previous cesarean section. This, combined with an increasing rate of caesarean sections worldwide, highlights the need for a high degree of clinical suspicion in the early diagnosis of uterine rupture.

Disclosure

The authors declare there are no conflicts of interest.

Consent

Consent was obtained from the patient to allow for the publication of this report and any relevant accompanying images.

Approval Statement

All authors have approved the final article.

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