Spontaneous uterine rupture at 31 weeks of amenorrhea on unscarred uterus: Case report

Saloua Tanouti1,2,3*, Hafsa Taheri1,2,3, Hanane Saadi1,2,3, Ahmed Mimouni1,2,3
1Department of Obstetrics and Gynecology, Mohammed VI University Hospital Oujda, Morocco.
2Department of Obstetrics and Gynecology, Faculty of Medicine Oujda, Morocco.
3Department of Obstetrics and Gynecology, Mohammed First University Oujda, Morocco.

Introduction

Uterine rupture during pregnancy is a serious condition associated with high maternal-fetal morbidity and mortality [1]. Few researchers have reported spontaneous uterine rupture without underlying causes, regardless of the gestational age or multiparous status. The rupture of an unscarred uterus has been reported to occur in 1 out of 15,000 cases [2].

Here we report the case of a 30-year-old parturient who presented with spontaneous uterine rupture in a non-scarred uterus at 32 weeks of amenorrhea, which was revealed by a typical misleading digestive symptoms. In the following, we discuss the diagnosis and treatment. Further more, we compare the presentation of our patient to the findings of previous studies.

Case presentation

We report the case of a 30-year-old parturient, gestation 4, para 3, all delivered vaginally, and without instrumental maneuvers. The gestational age of the current pregnancy was estimated at 31 weeks of amenorrhea. This pregnancy was well monitored, with two ultrasounds performed at 12 weeks, and 22 weeks of amenorrhea. At 31 weeks of amenorrhea, the parturient was admitted to the emergency room for diffuse and intense abdominal pain with vomiting and diarrhea.

On admission, physical examination revealed a conscious patient who was stable hemodynamically and respiratory, with a blood pressure of 110 mmHg/60 mmHg and a heart rate of 90 bpm with no fiver.
Gyneco-obstetrical examination revealed diffuse abdominal tenderness with abdominal distention. Fetal heart sounds were perceived, and no uterine contracture was found. Vaginal examination revealed a posterior cervix with no dilatation or effacement. The fetal presentation was mobile cephalic, and the amniotic sac was intact, with no per vaginal bleeding.

Obstetric ultrasound revealed a progressive monofetal pregnancy with an estimated fetal weight of 1600 g, corresponding to the 50th percentile. The quantity of amniotic fluid was adequate, with the placenta posterior, fundal, and lateralized to the left. There was peritoneal effusion of average abundance.

The fetal heart rate registration was normal. Laboratory investigations revealed microcytic hypochromic anemia with hemoglobin of 8.1 g/dl, no thrombocytopenia, a platelet count of 225000 L/mm³, a correct prothrombin ratio of 97%, fibrinogen 2.5, and blood type ARH+.

Because of the presence of a peritoneal effusion on ultrasound examination and the vomiting, an abdomino pelvic scan was performed, revealing a large uterine rupture with extravasation of the contrast medium from the uterine fundus and a hemoperitoneum of great abundance (Figure 1).

A study carried out in 2004 reported a perinatal mortality rate ranging from 18.5% to 26.9% in patients with healthy and scarred uterus, concluding that there was no statistically signifi-
cant difference between the two groups. The same conclusion was reached regarding maternal mortality [5].

In our patient, the paucity of clinical signs that led to this unrecognized rupture can be explained by the fact that the broad ligament remained intact, playing a compressive role, and the protruding amniotic pouch blocked the rupture. Since the clinical picture is misleading, CT scanning played an important role in the diagnostic process.

The recommended management requires a first intensive resuscitation followed by surgical treatment, ideally consisting of a conservative approach in young women wishing to become pregnant, and it involves simple suturing of the rupture. When conservative treatment seems impossible due to the extent of lesions, a hysterectomy is required [7,8]. In our case, the patient consented to tubal ligation.

The main obstetric differential diagnoses to be considered urgently are retro placental hematoma with or without associated HELLP syndrome or a detachment of the normally inserted placenta for which imaging may be beneficial [9,3].

The risk of recurrence in the event of a new pregnancy ranges from 4% to 19%, depending on many series [1,5]. Therefore, it is necessary to fully inform the patient and to ensure her understanding to establish effective contraception and avoid any unwanted pregnancies [10].

Most authors agree that the risk of recurrence is higher on a scar on the body than on a scar in the lower segment, estimated to range from 4% to 9% in the first case, and from 0.2% to 1.5% in the second [11], which explains our decision to perform a tubal ligation.

**Conclusion**

Uterine rupture in an unscarred uterus is a rare, unpredictable, and serious complication. It should be considered in all pregnant women experiencing abdominal pain and signs of peritoneal irritation, regardless of the gestational age and history. Its diagnosis mainly based on imaging as the clinical picture can sometimes be poor or misleading. The management of this incident is a vital emergency involving the maternal and fetal prognosis, as well as the obstetrical outcome for the patient.

**References**