

Spontaneous uterine rupture in first trimester: A case report

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Abstract

Uterine rupture is one of the obstetric emergency complications affecting both the mother and fetus. Various risk factors contribute to the condition such as uterine scar and uterine anomalies, usually occurring in the late second and in the third trimester. However, it can occur in the first trimester which is extremely rare.

Obstetricians should consider this diagnosis in a pregnant woman especially after ruling out more common conditions.

Our case was a spontaneous uterine rupture at 13 weeks of gestation in a 28-year-old female.

The initial impression was a ruptured ectopic pregnancy with hemoperitoneum.

An emergency laparotomy revealed a ruptured uterus and the presence of a large amount of blood in the abdominal cavity.

Clinical signs of uterine rupture in early pregnancy are non-specific and should be distinguished from acute abdominal emergencies.

Key words: Uterine rupture, first trimester pregnancy

Introduction

Uterine rupture is a hot obstetric emergency requiring rapid action and intervention from obstetricians to save the mother and fetus (1).

There are several risk factors that contribute to this condition, but the most common risk factor is uterine scar either due to caesarean section or uterine surgery (2,3).

This condition occurs in the late second and in the third trimester or during labour but is extremely rare in the first trimester with few cases reported in literature.

We report a case of a multiparous woman with multiple uterine surgery who presented with hemoperitoneum and uterine rupture.

Case report

A 28 year old multiparous woman with a history of previous 4 caesarean sections complicated by uterine rupture at term in the last pregnancy, presented to us one year later at 13 weeks of gestation with severe lower abdominal pain and heavy vaginal bleeding while working at her house.

The patient was semi-conscious with a heart rate of 121 BPM and a blood pressure of 84/42 for which an IV access was obtained, and fluids were given immediately, and bloods were sent for FBC, X-match and 4 units of blood were prepared.

On examination the abdomen was rigid and tender to palpate.

Ultra sound was done at the bed side which showed a small haematoma close to the uterus and a moderate amount of fluid in the abdomen and the pouch of Douglas with a fetus of 12 weeks of age with no fetal heart.

A decision was done to take the patient to theatre for laparotomy.

In theatre haemoglobin was 65 gm/dl so 2 units of blood were given.

Laparotomy revealed a large amount of blood in the abdomen with a large organized haematoma (Figures 1,2)

A site in the anterior wall at the site of previous caesarean scar was open and a sac was protruding from it. The sac was removed intact (Figures 3,4) and abdomen cleaned.

The opening was sutured with 1 vicryl suture and haemostasis was secured.

2 more units were given post operatively.

The patient's post-operative recovery was uneventful, and the patient was discharged after 4 days during which findings were explained to her and an advice of earlier

caesarean section in case of a new pregnancy.

Discussion

Information obtained from literature showed that most cases had various risk factors (4).

It is important to remember that the most important cause to determine the risk of uterine rupture is whether the uterus has had previous scar or not (2).

Previous injuries to the uterus such as caesarean section, hysteroscopic resection of uterine septum, and myomectomy are all considered as predisposing factors for uterine rupture (5).

The incidence rate of uterine rupture is 1:17000-20000 (6) with a morbidity and mortality estimated between 20-65% (7).

Other factors that contribute to uterine rupture in an intact uterus include high parity (4 or more), uterine abnormalities, obstetric manoeuvres, abnormal placentation, malpresentation, excessive use of oxytocin and misoprostol (8), vigorous fundal pressure during delivery and cocaine abuse (9).

There are also some research reports that observed a non-gravid uteri rupture (10,11).

In our case the patient had a previous uterine surgery which is considered as a risk factor on top of which there is a history of trauma to the abdomen.

Clinical signs of uterine rupture in early pregnancy are non-specific and must be distinguished from other causes of acute abdomen. Abdominal pain and vaginal bleeding are classical and important findings.

Differential diagnosis includes bleeding corpus luteum, heterotopic or ectopic pregnancy and molar pregnancy with secondary invasion (12) with the most relevant one being ectopic pregnancy (13).

Ultrasound may sometimes have limited value and urgent surgical intervention is crucial to prevent catastrophic consequences.

An emergency laparoscopy and laparotomy is required (depending on the findings, condition of the patient and skills of the surgeon) it must be done to facilitate the correct diagnosis and proper management of the patient to reduce maternal and fetal morbidity and mortality rates associated with uterine rupture.

In our case a laparotomy was done due to instability of the patient and an early surgical intervention was the key to successful management.

The management mainly depends on the extent of the lesion, parity, age and condition of the patient, and expertise of the surgeon.

Figure 1



Figure 2



Figures 1 and 2 an organized haematoma and free blood in abdomen

Figure 3



Figure 4



In the past hysterectomy was the preferred management option however recent studies showed suturing of the rupture can be performed with or without bilateral tubal ligation depending on the women's wish to preserve fertility.

The risk of recurrence is between 4-19% at a subsequent pregnancy (14) for this reason all women should be counselled on the need to go for a caesarean section in future pregnancies.

In our case uterine suturing was done without tubal ligation due to social and religious reasons.

Conclusion

Uterine rupture in first trimester is very rare and can end up with catastrophic results.

An early diagnosis and a fast surgical intervention can be the difference between good outcomes and catastrophic results.

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