

Case Reports

Spontaneous Uterine Rupture at 16-week Gestation After Abdominal Myomectomy

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Abstract

Uterine rupture during pregnancy after abdominal myomectomy is an uncommon complication. Most of these cases occur during the third trimester of pregnancy or during labor. We report a 16-week pregnant lady with previous history of abdominal myomectomy presenting with acute abdomen. Emergency laparotomy revealed a spontaneous uterine rupture. The fetus within the amniotic sac and the placenta were expelled in the abdominal cavity. Although it is rare, uterine rupture may occur early in pregnancy.

Keywords: Myomectomy, Pregnancy, uterine rupture.

(*J Med J 2009; Vol. 43 (4):351-354*)

Received

March 18, 2008

Accepted

September 28, 2008

Introduction

Myomectomy is a common gynecologic surgery. It can be performed abdominally or by laparoscopy. In cases where there is a submucous fibroid, hysteroscopic resection can be performed.

Uterine rupture during pregnancy is a life-threatening condition with high morbidity for the mother and high morbidity and mortality to the fetus. Most of the uterine ruptures are related to scarred uterus because of previous caesarean section and occasionally myomectomy.¹ The incidence of uterine rupture during pregnancy after abdominal myomectomy is ranging from 0-4%,^{2,3} where the incidence is about 1% after laparoscopic myomectomy.⁴

Most of the reported cases of uterine rupture after myomectomy occurred in the third and late second trimester of pregnancy or during labour,

especially with the presence of pathologically adherent placenta. Although uterine rupture is rare in early pregnancy, it should be taken into consideration in the differential diagnosis of acute abdominal pain presenting during pregnancy.⁵ We report a case of uterine rupture at 16 weeks of gestation in a patient with previous history of abdominal myomectomy.

Case report

A 30-year old lady, married for the last 12 years, presented to the emergency room at the 16th week of gestation complaining of sudden onset of generalized abdominal pain with no vaginal bleeding. She has history of abdominal myomectomy which was performed in another hospital 6 years ago. She was planned for an elective cesarean section in the subsequent pregnancies as the uterine cavity was opened during myomectomy.

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Her obstetric history was significant for two spontaneous first trimester miscarriages with no living children. In this pregnancy she had regular antenatal visits at our hospital starting from the 8th week of gestation, her last antenatal visit was one week prior to her presentation and showed a viable intrauterine pregnancy.

Upon presentation to the emergency room, physical examination showed that she was pale, with a pulse of 100/minute and a blood pressure of 100/60 mm Hg. Abdominal examination revealed tender abdomen with guarding and the uterine size was about 12 weeks gestation. Ultrasound examination showed an empty uterus with the presence of the fetus within the amniotic sac inside the abdomen with no fetal heart activity. Emergency laparotomy was performed and showed an intact amniotic sac with the fetus in the abdomen. Placenta and clotted and non clotted blood of about 2 liters were removed from the abdomen (Figure 1).



Figure (1): *The fetus within the amniotic sac and the placenta.*

There was a uterine fundal ruptured at the site of previous myomectomy scar with active bleeding (Figure 2). Repair of the uterine rupture site was performed and homeostasis was secured. The patient received four units of blood. Her postoperative period was uneventful and she was discharged home in good general conditions.



Figure (2): *Intraoperative findings showing uterine fundal rupture.*

Discussion

Uterine rupture during pregnancy is a rare occurrence that frequently results in life-threatening maternal and fetal compromise, whereas uterine scar dehiscence is a more common event that seldom results in major maternal or fetal complications. By definition, uterine scar dehiscence constitutes separation of a preexisting scar that does not disrupt the overlying visceral peritoneum (uterine serosa) and that does not significantly bleed from its edges. In addition, the fetus, placenta, and umbilical cord must be contained within the uterine cavity, without a need for cesarean delivery because of fetal distress.

By contrast, uterine rupture is defined as a full-thickness separation of the uterine wall and the overlying serosa. Uterine rupture is associated with clinically significant uterine bleeding; fetal distress; expulsion or protrusion of the fetus, placenta, or both into the abdominal cavity; and the need for prompt cesarean delivery, uterine repair, or hysterectomy.

Uterine rupture during pregnancy is a life-threatening condition to the mother and to her fetus. The main predisposing factors are related to previous uterine scarring including previous cesarean section, laparoscopic^{6,7} or abdominal myomectomy,⁸ or previous uterine perforation after dilatation and curettage (D&C).

Most of the uterine ruptures occur during the third trimester of pregnancy or during labour. In our case, the uterine rupture occurred as early as 16 weeks gestation. This made the diagnosis of uterine rupture unlikely, but ultrasound examination was very helpful in making immediate diagnosis.

Previous myomectomy may lead to uterine rupture in subsequent pregnancies, especially if the uterine cavity was opened during surgery. Other factors that may contribute to uterine rupture during pregnancy after myomectomy include faulty technique of uterine incision repair, infection and hematoma formation. This may lead to poor healing of the uterine rupture site and later rupture during subsequent pregnancy. Proper closure of the uterine wall and meticulous repair of the uterine incision may prevent uterine rupture in subsequent pregnancy. There are many reports in the literature confirming uterine rupture after laparoscopic myomectomy, superficial laparoscopic myomectomy⁹ and abdominal myomectomy. Our patient had abdominal myomectomy and the uterine cavity was opened during surgery, so she was planned for an elective cesarean section in her subsequent pregnancies.

Patients with suspected uterine rupture during pregnancy and labour may present with abdominal pain, vaginal bleeding or even changes in the fetal heart activity pattern during labour¹⁰. In our case, the patient presented with sudden onset generalized abdominal pain with no other associated symptoms. Although she presented at an early gestational age, ultrasound examination was helpful in detecting that the pregnancy was outside the uterus. This allowed a prompt intervention and immediate emergency laparotomy to save her life.

In conclusion, in patients with previous uterine surgery presenting with abdominal pain during pregnancy, uterine rupture should be suspected, even if they present at an early gestation.

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تمزق الرحم العفوي في الاسبوع السادس عشر الحمل بعد عملية ازالة الياف رحمية عن طريق فتح البطن

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الملخص

تمزق الرحم خلال الحمل بعد عملية إزالة الألياف الرحمية بفتح البطن هو اختلاط غير شائع. وتحدث معظم هذه الحالات خلال الثلث الأخير من الحمل أو خلال الولادة. نعرض حالة عن سيدة حامل في أسبوعها الحاملي السادس عشر ولديها سيرة مرضية عن إجراء عملية استئصال لألياف رحمية عن طريق فتح البطن جاءت تشكو من ألم بطني حاد. أجريت عملية فتح بطن اسعافية للمريضة تبين منها وجود تمزق عفوي في الرحم، كما وجد الجنين داخل الكيس المحي (الامينوسي) مع المشيمة خارج الرحم في تجويف البطن. على الرغم من ندرته، إلا أن تمزق الرحم قد يحدث مبكراً خلال الحمل.

الكلمات الدالة: تمزق الرحم العفوي، عملية إزالة الألياف الرحمية، حمل.