CASE REPORT

Non-operative treatment of ruptured ectopic pregnancy

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SUMMARY

Ruptured ectopic pregnancy often causes abdominal pain, vaginal bleeding and internal haemorrhage; it is a very serious condition and can be life-threatening. Patients with a ruptured ectopic pregnancy are normally treated by surgical intervention. We describe a case of a 20-year-old woman who presented with abdominal pain and vaginal bleeding. Urine human chorionic gonadotropin was positive and on examination she had localised tenderness of the abdomen. Transvaginal ultrasonography revealed a ruptured tubal pregnancy along with blood in the abdomen. The patient was closely monitored and treated conservatively, with a successful outcome. She recovered uneventfully. Our case shows that non-operative treatment of a ruptured ectopic pregnancy may be a possible non-invasive treatment option in highly selected patients.

BACKGROUND

Ectopic pregnancy occurs in 1.3–2.4% of all pregnancies and is one of the most common causes of first trimester complications.^{1–4} Ectopic pregnancy is considered to be a gynaecological emergency, and can be life-threatening.^{1–4} It accounts for up to 6% of all pregnancy-associated deaths.^{2–4} The incidence of ectopic pregnancies that rupture is around 18%, and presumably rises with increasing gestational age.^{1–4} The majority of patients present at week 4–8 of gestation.^{1–4}

The typical symptoms of a ruptured ectopic pregnancy are vaginal bleeding and abdominal pain. Hence, ectopic pregnancy should be suspected when a woman presents with vaginal bleeding and abdominal pain, and a positive pregnancy test.

The internal haemorrhage that occurs due to rupture of an ectopic pregnancy may be life-threatening.¹ Surgery is considered to be the gold standard of treatment for ruptured ectopic pregnancy.² In this case, we present a woman with a ruptured ectopic pregnancy who was treated successfully using non-operative measures.

CASE PRESENTATION

A 20-year-old woman presented with vaginal bleeding and abdominal pain. She had no history of operative procedures. She had once been treated with antibiotics, for pelvic inflammatory disease. At presentation, there was no fever, no dysuria and no vaginal discharge. Urine human chorionic gonadotropin was positive. She had been taking oral contraceptive pills, however, not consistently. She suffered from nausea and had a 2-day history of

vomiting. Otherwise, she had no subjective signs of pregnancy. She had had an episode of vaginal bleeding 2 weeks prior and menstrual bleeding the month before this as well, though her menstrual bleedings had been irregular. Gestational age was uncertain based on history, though, probably between 5 and 8 weeks.

During the day of presentation, the vaginal bleeding decreased and the patient suffered from an increase in abdominal pain. The pain was radiating towards the groin, lower back and right shoulder.

INVESTIGATIONS

On physical examination, the patient was haemodynamically stable. The abdomen was found with localised tenderness and peritoneal irritation in the lower abdomen. Laboratory investigation showed haemoglobin of 6.9 mmol/L. Gynaecological investigation showed anteversion of the uterus and bleeding from the uterine cavity. Transvaginal ultrasonography showed blood and haematoma in the uterine cavity. To the left of the uterus, the salpinx was surrounded by free fluid, which was consistent with blood (figure 1). The findings were consistent with a ruptured tubal ectopic pregnancy. Doppler ultrasonography revealed no ongoing bleeding. Abdominal ultrasonography showed blood in the peritoneal cavity, but no free fluid could be detected in Morisson's pouch between the liver and right kidney.

The patient was monitored carefully. Vital signs including blood pressure, heart rate, respiratory rate and body temperature were recorded regularly. The patient remained haemodynamically stable. Laboratory investigations were repeated, showing stable haemoglobin levels.

DIFFERENTIAL DIAGNOSIS

- ▶ A miscarriage can also present with vaginal bleeding and lower abdominal pain. Hence miscarriage was considered a differential diagnosis.
- ▶ Tubal abortion, that is, the embryo being expelled by the fallopian tube before rupture occurs, can be considered in the differential diagnosis. Tubal abortion may cause pain and bleeding.

TREATMENT

The patient was treated non-operatively. She received nil per mouth, and was observed closely with monitoring of blood pressure, pulse, respiratory rate, body temperature, haemoglobin levels and symptoms of ongoing bleeding (dizziness, loss

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Figure 1 Ruptured left tubal ectopic pregnancy with free fluid consistent with blood.

of consciousness). Moreover, she was treated with intravenous liquid therapy, to compensate for the hypovolemia that had occurred while she was bleeding, and to administer fluid while she received nil per mouth. She also received intravenous tranexamic acid at a dose of 1 g four times daily to prevent bleeding.

Operative treatment was considered, but since the patient was haemodynamically stable, and vaginal ultrasound including Doppler showed no ongoing bleeding, expectant management was chosen.

OUTCOME AND FOLLOW-UP

During admission, the vaginal bleeding and abdominal pain decreased. The patient was discharged from hospital 2 days after admission. At discharge, her haemoglobin level was 6.4 mmol/L. She continued treatment with oral tranexamic acid for a few more days. Three days after discharge, she was seen in the outpatient department. She was doing fine, and transvaginal ultrasonography showed no ongoing ectopic pregnancy; the amount of free intra-abdominal fluid had decreased considerably.

DISCUSSION

Over 50% of ectopic pregnancies are asymptomatic before tubal rupture.¹ Early diagnosis of an ectopic extrauterine pregnancy is of utmost importance to reduce the number of complications, especially death.² Surgery is considered the gold standard for treatment of ruptured ectopic pregnancy. Non-operative

treatment has become increasingly popular for treatment of traumatic intra-abdominal lesions such as of the liver, spleen and pancreas.⁵ We have searched the literature extensively, but been unable to find any case reports or other literature on non-operative treatment of ruptured ectopic pregnancy. Rupture in itself is considered a definite surgical indication in ectopic pregnancy.^{2,3} One study pointed out that some ectopic pregnancies undergo spontaneous resolution, but not if there was a rupture.¹ Tubal rupture is usually associated with profound haemorrhage, though this case shows that expectant management with close monitoring of vital signs and haemodynamic stability may be a valuable treatment option for highly selected patients.¹ Consequences of operative versus non-operative treatment on patient morbidity and mortality, as well as long-term outcome for future fertility and patient recovery in general after surgery, are unclear. Other case reports and case studies are needed to confirm that non-operative treatment is a safe treatment option for highly selected patients with ruptured ectopic pregnancy.

Learning points

- Patients with established pregnancy presenting with abdominal pain, vaginal bleeding or signs of internal bleeding may have a ruptured ectopic pregnancy.
- Surgical intervention is standard treatment for ruptured ectopic pregnancies.
- More research is needed to clarify whether non-operative treatment of ruptured ectopic pregnancy in highly selected patients is a valuable treatment option.

Competing interests None declared.

Patient consent Obtained.

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