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The management of ectopic pregnancy

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Summary The methods used for the diagnosis and management of ectopic pregnancy have developed over the past 10 years. Improved ultrasound and rapid access to serum human chorionic gonadotrophin monitoring have increased the accuracy of diagnosis. Laparoscopic surgery, rather than open surgery, is now the main method of treatment. The medical treatment of ectopic pregnancy in the form of methotrexate therapy is popular in a number of centres. The effects on future fertility and the recurrence rate of ectopic pregnancies will alter patients' preference for treatment.

Introduction

The incidence of ectopic pregnancy is rising and still accounts for a significant number of the deaths reported in the last Confidential Enquiry of Maternal Deaths. Ectopic pregnancy accounted for 11 deaths out of the 15 in early pregnancy in the 2000–2002 report. Six of the 11 deaths were associated with substandard care (Fig. 1). Each department should develop protocols for the surgical and medical management of ectopic pregnancy. Training should be available so that surgeons can safely provide both laparoscopic and open surgery for the management of ectopic pregnancy.

Case 1

A 23-year-old Indian lady was admitted to the accident and emergency (A&E) department at 02.00 h with lower abdominal pain, shoulder tip pain and vaginal bleeding. The last menstrual period was reported to have commenced 14 days earlier but was shorter than usual, lasting 2 days. A urinary pregnancy test was positive. The patient was given 10 mg morphine. Intravenous access was achieved, blood was taken for a full blood count, group and save. The haemoglobin level was returned at 9.9 g/dl. On examination, there was guarding and rebound tenderness. Blood pressure and pulse were stable. Serum was also saved to perform a quantitative human chorionic gonadotrophin (hCG) level later that morning. The patient was reviewed after receiving the morphine by the senior house office in gynaecology, her pain had settled, and she was admitted overnight to the

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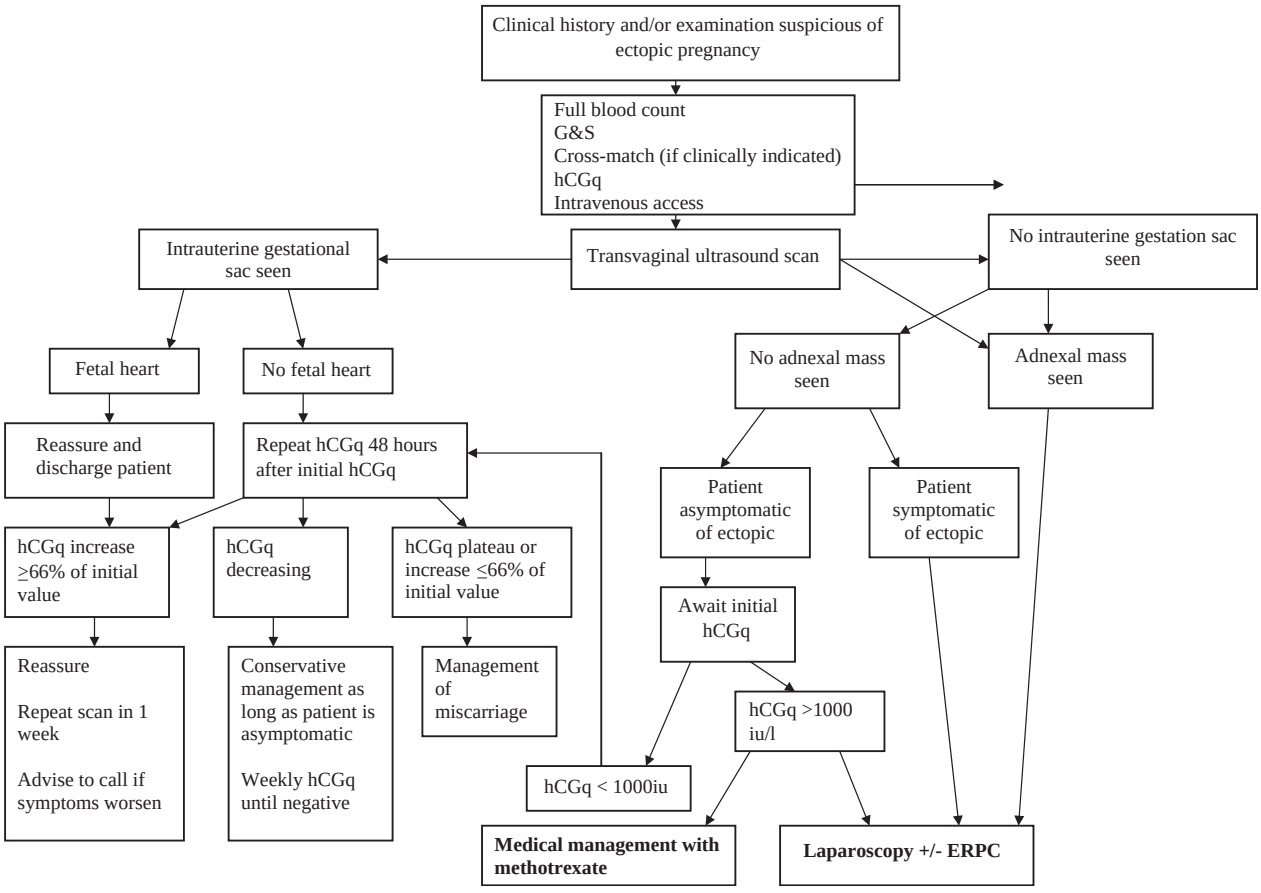

Figure 1 Flow diagram for the management of suspected ectopic pregnancy. hCGq, xxx of human chorionic gonadotrophin.

gynaecology ward. The next morning, an ultrasound was performed, revealing a large ($15 \times 5 \times 7$ cm) mass in the left adnexa and no intrauterine pregnancy. The hCG level returned at 1250 iu/l, and a repeat haemoglobin level was 8.6 g/dl. The decision was made to perform an emergency CPOD 1A laparoscopy, at which approximately 1200 ml haemoperitoneum was found along with a 3 cm ruptured isthmic ectopic pregnancy. The right tube was normal. A left total salpingectomy was performed laparoscopically.

This is not an uncommon scenario. Many women present via A&E departments out of hours. From the history, the classic time of presentation is at around 6 weeks' gestation with pain and dark menstrual loss, so in this case the last menstrual period was unhelpful and possibly confusing. The symptoms described of abdominal and shoulder tip pain should have given cause for concern and are classical of blood irritating the peritoneum. Each A&E department should have written protocols to perform either urine or blood pregnancy tests, and they should also involve staff from the obstetric and gynaecology departments. When reviewed by the gynaecology senior house officer, the symptoms of pain had settled, on account of the morphine, which possibly led to false reassurance, and the patient was sent directly to the ward to be observed.

The haemoglobin level was associated with possible anaemia owing to racial variation. A disproportionate number (7/11) of the deaths in the Confidential Enquiry occurred in women from ethnic minorities, and one has to be wary of making assumptions based on ethnicity. Table 1 shows the deaths from ectopic pregnancy and mortality rates per 1000 estimated pregnancies.

Once a scan has revealed a lack of intrauterine pregnancy and a mass, along with an hCG level greater than 1000 iu/l, the diagnosis is easier to make in the absence of symptoms. The absence of an intrauterine gestation sac and an hCG titre of between 1000 and 1500 iu/l has been shown to be highly predictive of ectopic pregnancy (sensitivity 0–95%, specificity 95%). With an odds ratio of having an ectopic of 24.8, this makes intervention rather than expectant management appropriate.