MEDICAL

Intramuscular ergometrine may be required to reduce heavy bleeding in cases of incomplete, inevitable or complete miscarriage. In patients with mild bleeding it may be possible to avoid surgical evacuation in incomplete miscarriage by using mifepristone and prostaglandins to induce evacuation of the uterus. The patient should be warned of prolonged irregular bleeding.

SURGICAL

Removal of fetal tissue from the os can stop uncontrollable bleeding. In incomplete or missed miscarriage, evacuation of retained products of conception under general anaesthetic is used to prevent continued bleeding and risk of infection.

CASE 1.2 – I am 6 weeks pregnant and have pain and bleeding.

Q1: What is the likely differential diagnosis?

A1

- Ectopic pregnancy.
- Miscarriage (see Case 1.1).

Q2: What issues in the given history support the diagnosis?

A2

Diagnosis of ectopic pregnancy can be difficult. A period of amenorrhoea, abdominal/pelvic pain and slight bleeding is classically associated with ectopic pregnancy. Syncopal episodes (fainting/dizziness) are associated with fallopian tube distension and stimulation of the autonomic nervous system. Previous surgery (e.g. appendectomy), pelvic inflammatory disease (PID) and conception after infertility are all risk factors for ectopic pregnancy.

Q3: What additional features in the history would you seek to support a particular diagnosis?

A3

Any factors that may damage the fallopian tubes are risk factors for ectopic pregnancy, including PID secondary to a sexually transmitted infection (STI) or an intrauterine contraceptive device (IUCD) (but also by the mechanism whereby IUCDs prevent intrauterine implantation). Tubal surgery, such as reversal of sterilization (8 per cent risk of ectopic pregnancy) and salpingostomy for hydrosalpinges, and assisted conception (e.g. in vitro fertilization or IVF) are additional risk factors. Other symptoms include shoulder-tip pain resulting from irritation of the diaphragm by blood leaking from the ectopic.

Q4: What clinical examination would you perform and why?

A4

Assessment of the patient's haemodynamic stability by checking blood pressure (to detect hypotension) and pulse (to detect tachycardia) will indicate the degree of blood loss. An abdominal examination should be performed to elicit tenderness to palpation, rebound tenderness, guarding or rigidity, as well as gentle vaginal examination to detect cervical excitation (pelvic tenderness on moving the cervix) and the possibility of palpating a tender adnexal mass. Care should be taken not to convert an unruptured stable ectopic to an emergency situation by compressing and rupturing an ectopic mass during bimanual vaginal examination.

Q5: What investigations would be most helpful and why?

A5

- **Urine βhCG** ✓ This should always be tested in women of reproductive age who present with pain and bleeding, to confirm pregnancy.
- **FBC** ✓ To assess the systemic effect of bleeding.
- **Blood group** ✓ To check the patient's rhesus status (if rhesus negative, prophylactic anti-D is given).
- **Group and save, cross-match** ✓ In cases of shock.
- **Serum βhCG** ✓ Normally a doubling of levels in 48 h is associated with intrauterine pregnancy. This test should be undertaken if conservative management is planned in a stable patient.
- **USS (preferably transvaginal)** ✓ This can indicate an intrauterine pregnancy as early as 6 weeks amenorrhoea. An empty uterus, fluid in the pouch of Douglas and an adnexal mass on USS would give a high index of suspicion of ectopic pregnancy.
- **Diagnostic laparoscopy** ✓ This is the gold standard for confirming the diagnosis. Very early ectopics can still be missed at laparoscopy. The false-negative rate is about 5 per cent.

Q6: What treatment options are appropriate?

A6

CONSERVATIVE

There is no place for conservative management in ectopic pregnancy if the patient is *symptomatic*, because this is a life-threatening condition. The patient should be admitted to hospital and definitive treatment administered.

A conservative approach would be appropriate only if the patient were asymptomatic and, after investigations, there was uncertainty about the diagnosis. A very early intrauterine pregnancy may not be visible on a scan, but serum βhCG repeated after 48 h would show a doubling of levels if the pregnancy was viable. If the pregnancy is not viable, βhCG levels will fall and will eventually become undetectable.

MEDICAL

Unruptured ectopics less than 3–4 cm in size can be treated with methotrexate systematically (or by administering it into the ectopic sac under USS or laparoscopic guidance). Follow-up with βhCG is essential, because the risk of persistent ectopic pregnancy is high. This method may allow the tube to function in the future, because 60 per cent of women will subsequently have a successful pregnancy. There is a 15 per cent risk of recurrent ectopic pregnancy.

SURGICAL

This may involve laparoscopy or laparotomy.

- Milking of the ectopic or salpingotomy can be used for removal of an ectopic pregnancy without removing the tube. Both of these procedures salvage the tube, but follow-up with βhCGs is essential to exclude a persistent ectopic pregnancy.
- Salpingectomy involves removal of the ectopic with the tube. Follow-up with βhCG is not necessary in this case.

CASE 1.3 – I am pregnant and cannot keep anything down.

Q1: What is the likely differential diagnosis?

A1

- Hyperemesis gravidarum (multiple pregnancy, molar pregnancy, thyrotoxicosis).
- Urinary tract infection (UTI).
- Appendicitis.
- Gastrointestinal infection.
- Rarer problems (e.g. bowel obstruction, hepatic disorders or cerebral tumours).

Q2: What issues in the given history support the diagnosis?

A2

Pregnancy and vomiting of all food and drink support the diagnosis of hyperemesis, particularly in the first trimester.

Q3: What additional features in the history would you seek to support a particular diagnosis?

A3

Acute onset of the problem would support a diagnosis such as gastroenteritis or appendicitis. A longer duration of the symptoms with pre-existing nausea/vomiting would support a diagnosis of hyperemesis. Associated symptoms (e.g. diarrhoea, urinary symptoms, abdominal pain), other members of the family with the same problem and symptoms of thyrotoxicosis would support a diagnosis other than hyperemesis.

Q4: What clinical examination would you perform and why?

A4

Look for evidence of dehydration (e.g. dry mouth, tachycardia or postural hypotension). Abdominal signs of tenderness and guarding would support a diagnosis of appendicitis. A large-for-dates uterus would suggest multiple pregnancy as a cause of hyperemesis.

Q5: What investigations would be most helpful and why?

A5

• **FBC**	✓	Haemoglobin for haemoconcentration and white cell count (WCC) for infection.
• **U&Es**	✓	To check for dehydration.
• **MSU**	✓	To exclude UTI.
• **Urinalysis**	✓	The presence of ketones supports a history of excessive vomiting.
• **USS**	✓	To exclude molar and multiple pregnancy. Trisomy 18 can cause prolonged severe vomiting extending into the late second trimester.
• **LFT**	±	For liver disorders.
• **TSH**	±	To exclude thyrotoxicosis. Note that thyroid-stimulating hormone (TSH) can be suppressed in hyperemesis.

Q6: What treatment options are appropriate?

A6

Conditions other than hyperemesis require treatment specific to the problem (e.g. evacuate molar pregnancy with appropriate follow-up (urinary and serum βhCGs and avoiding pregnancy with adequate contraception until normal βhCGs have been obtained; appendectomy for appendicitis).

Hyperemesis

SUPPORTIVE

- Admit the patient to hospital.
- Reassure her that this problem is likely to resolve spontaneously at 12–14 weeks when βhCG levels start to decline.
- Offer psychological support (many women have additional social and emotional problems).

MEDICAL

- Intravenous fluids.
- Antiemetics (prochlorperazine, intramuscular suppository; intramuscular metoclopramide; intravenous ondansetron).
- Introduce foods as appropriate in small amounts – avoid fatty foods.
- Steroids may be given in severe cases.
- Vitamin supplementation (vitamin B_6 if prolonged vomiting occurs).
- May occasionally require parenteral nutrition.

SURGICAL

- In severe cases, termination of pregnancy may need to be considered.