Per vaginal (PV) bleeding in early pregnancy

With Dr Neil Campbell, Staff Specialist in Obstetrics & Gynaecology at Royal Prince Alfred Hospital

Case - 30 year old woman presents to the ED 6 weeks gestation with PV bleeding

1. As a junior doctor, what is your initial approach?
   If haemodynamically unstable, move the patient to the resuscitation bay, stabilise and implement resuscitative measures Get IV access and order bloods including group & hold ± cross-match, FBC, β-hCG, progesterone.

   If haemodynamically stable, take a thorough history and perform a clinical examination, before ordering relevant investigations and contacting the appropriate personnel.

2. What are the differential diagnoses for PV bleeding in early pregnancy?
   • Threatened miscarriage (acute, minimal bleeding, no pain)
   • Inevitable miscarriage
   • Incomplete miscarriage (heavy bleeding, cramping)
   • Missed miscarriage
   • Ectopic pregnancy
   • Ovarian pathology – cyst rupture, torsion
   • Appendicitis

3. Assuming the patient is stable, what would your approach be?
   • History
     o Ask about the following:
       • Severity of pain
       • Amount and duration of bleeding
       • Risk factors for ectopic pregnancy – previous ectopic, pelvic inflammatory disease, endometriosis

   • Examination
     o Vitals
     o General cardiovascular + respiratory examination
     o Abdominal palpation – looking for signs of unilateral peritonism ± shoulder tip pain secondary to diaphragmatic irritation
     o Clinical inspection of vulva and vagina – quantify bleeding, and check for any products of conception (POC)
     o Speculum examination – quantify bleeding, check cervical os status (open or closed) and the presence of POC near the os, or in the vagina
     o Bimanual examination – estimate the size of uterus, and localize area of tenderness

   *If uncertain with performing a speculum examination, it would be advisable to ask a more senior medical officer to supervise.
• Investigations
  o FBC
  o Progesterone – a helpful marker when history and clinical examination yield an uncertain diagnosis. Two examples:
    • Low β-hCG, progesterone < 10 and empty uterus on ultrasound, indicates complete miscarriage. The patient can be discharged and followed up in a few days in the Early Pregnancy clinic.
    • β-hCG 800-1000, progesterone 20-60, indicates that an ectopic is more likely
  o Group & hold ± cross-match
    • Rhesus blood group must be collected in any scenario of PV bleeding
    • 20-30% of women are Rhesus-negative and require anti-D injections to prevent sensitization upon exposure to Rhesus-positive fetal cells in the maternal circulation.
  o If POC are obtained from the speculum examination, place in formalin and send to pathology. Rare risk of a partial or complete molar pregnancy.

4. Ultrasounds – when should you do it, and what is the difference between the transabdominal and transvaginal approach?
   Ultrasound is a good initial screening tool when combined with a β-hCG level and clinical suspicion for an ectopic pregnancy.
   • Transvaginal ultrasound is more sensitive for picking up a gestational sac, which should be visible if β-hCG > 1000.
   • Transabdominal ultrasound can detect an 8-week embryo and fetal heartbeat.

5. Results return. The β-hCG is positive, but there is no gestational sac on transvaginal ultrasound. What are your differentials?
   • Complete miscarriage
   • Early pregnancy of uncertain viability
   • Ectopic pregnancy, yet to be determined

6. What is your management?
   • Complete miscarriage
     o Discharge and follow up β-hCG levels in Early Pregnancy Clinic
   • Early pregnancy of uncertain viability (stable), the options are:
     o If β-hCG < 1000, discharge and follow up in Early Pregnancy Clinic
     o Give Mifepristone for 48 hrs before commencing oral/buccal Misoprostol
     o Wait and see, with serial β-hCG levels
   • Early pregnancy of uncertain viability (unstable)
     o If β-hCG < 1000 and symptomatic with risk factors, contact O&G team for emergency dilatation & curettage
     • If Rhesus-negative, give anti-D IMI 250U (< 12 weeks gestation) or 625U (> 12 weeks gestation)
     • Counselling available in Early Pregnancy Clinic, liaise with midwives and social workers

7. Take home messages
   • Always consider ectopic pregnancy!
   • In any amount of PV bleeding in pregnancy, check the Rhesus-group.
   • If uncertain about discharging a patient, escalate care.

Reference: