CASE 3

Short case number: 3_4_3
Category: Endocrine & Reproductive
Discipline: Obstetrics and Gynaecology
Setting: Emergency Department
Topic: Bleeding in early pregnancy

Case

Fiona Elder, aged 25 years, presents with a history of 8 weeks amenorrhoea and the onset of central lower abdominal pain and bleeding per vagina. On examination there is dark blood in the cervix. The uterus feels 8 weeks in size, there is no cervical excitation and no adnexal tenderness.

Questions

1. What is the likely diagnosis?
2. Summarise the key features on history, examination and ultrasound of threatened miscarriage, incomplete miscarriage, complete miscarriage, septic miscarriage and missed miscarriage.
3. Discuss the management options for each form of miscarriage
4. Outline management of Fiona in terms of further history, examination, investigations and treatment.
5. What is a molar pregnancy and how does it typically present?
6. List the differential diagnosis of acute abdominal pain in early pregnancy?

Suggested Reading

- Abbott, J., Bowyer, L., & Finn, M. (2014). *Obstetrics and Gynaecology: an evidence-based guide (2nd ed).* Chapters 10, 23, Australia, Elsevier.
- Edmonds, K. (ed). (2007) *Dewhurst's Textbook of Obstetrics & Gynaecology.* Blackwell Publishing.

Additional Reading

https://extranet.who.int/rhl/topics/gynaecology-infertility-and-cancers/gynaecology-and-infertility/interventions-tubal-ectopic-pregnancy

ANSWERS

1. Diagnosis of bleeding in early pregnancy

Bleeding and pain in early pregnancy can be difficult to differentiate between a miscarriage and ectopic. The classic triad is:
An episode of amenorrhoea
Vaginal bleeding
Abdominal pain

Every woman who presents with abdominal pain and who is within child bearing age should have a urinary beta HCG performed even if there is no episode of amenorrhoea.

DDx – Ectopic or miscarriage.

In this case, there is no adnexal tenderness or cervical excitation which would make the diagnosis of ectopic unlikely.

2. Summarise the key features on history, examination and ultrasound of threatened miscarriage, incomplete miscarriage, complete miscarriage, septic miscarriage and missed miscarriage.

Signs and Symptoms for differential diagnosis of miscarriage	
Threatened	Bleeding usually painless, No pelvic tenderness, Live foetus on U/S
Incomplete	Pain and episode heavy bleeding. Products of conception may be seen on vaginal examination. Retained products conception on U/S.
Complete	Episode heavy bleeding and pain with passage of conceptus. Bleeding now scant or absent. Normal non-tender uterus. Empty uterus on U/S.
Septic	Usually incomplete miscarriage with sepsis. Pain, tenderness and febrile >37.5.
Missed	Bleeding, usually no pain. Enlarged uterus. U/S > 6 week embryo and embryonic heart beat absent or sac greater than 25mm and no embryo seen.

3. Management options

Conservative

Need regular follow up. Risk heavy bleeding, pain. May need evacuation of uterus
Threatened miscarriage –bleeding settles with rest and reassurance. Hospitalise if heavy bleeding. May progress to miscarriage.
Incomplete, missed – wait for spontaneous miscarriage. Risk pain, heavy bleeding, and transfusion.
Most women with missed miscarriage elect evacuation.

Medical Evacuation – Misoprostol prostaglandin E1 analogue taken orally or vaginally as an outpatient. May not be complete and need surgical evacuation
Surgical Evacuation– Dilation and Suction uterine curettage. Necessary if haemodynamically unstable or septic. Risk perforation uterus, Ashermann's syndrome.

Non-sensitised Rhesus-negative women require 250 IU of anti-D within 72 hours of miscarriage.

Most importantly, all women should have counselling following a miscarriage about the significant psychological impact this may have. Whilst the physical size of the foetus is small, the mother has the expectation that she was having a child and the loss centres around the loss of a child NOT of an 8 week foetus. There are also significant hormonal changes that occur with the sudden reduction in oestrogen and progesterone which have effects as well.

4. Outline management of Fiona in terms of further history, examination, investigations and treatment.

Full history: Detailed history of bleeding including if products of conception seen. Obstetric history including miscarriage and ectopic pregnancies. Gynaecological history including PID (increases risk significantly of an ectopic), tubal or appendiceal surgery (adhesions increase the risk of ectopic).

Investigations
Need bHCG to diagnosis pregnancy, transvaginal U/S to check correct in utero position and pregnancy viable-foetal heart present. Should be seen at 5 weeks (if bHCG is > 1500 IU and no sac seen then very high index of suspicion for ectopic), and management as above if miscarriage.
Need to know **Blood Group**. If Rhesus negative will need Anti D to prevent possible sensitization.
Treatment options as above.

5. What is a molar pregnancy and how does it typically present?

A molar pregnancy describes a group of tumours (Gestational trophoblastic disease) that arise from foetal trophoblast. In these tumours the trophoblast proliferates abnormally and is capable of unlimited growth, invasion or metastatic spread. They occur in association with pregnancy.
Hydatidiform moles are benign, while invasive mole, placental site trophoblastic tumour and choriocarcinoma are malignant.
Tumour marker beta HCG.
Malignant tumours sensitive to chemotherapy.

Presentation

- Early or recurrent hyperemesis (related high beta HCG)
- Early onset preeclampsia or hyperthyroidism
- Uterus large for dates and feels very soft
- Ultrasound — classic ground glass appearance from multiple vesicular structures. +/- large ovarian cysts.

- Vaginal bleeding +/- passage ‘grape-like’ vesicular structures. Histology to differentiate hydropic degeneration of placenta from trophoblastic disease.
- Histology — partial mole particularly, diagnosed after examination evacuated products of conception.
- Invasive mole presents with persistent bleeding post evacuation for hydatidiform mole or persistent or rising levels beta HCG.
- Diagnosis is dependent on histological confirmation of gestational trophoblastic disease
- Management of hydatidiform mole involves suction evacuation of uterus and follow up with weekly, then monthly betaHCG assays for 6 months. Reliable contraception is advised for 6months.
- Neoplasia is diagnosed and chemotherapy instituted if betaHCG levels:
    - Do not decrease by 10% 3 weeks after evacuation
    - Increase more than 10% in a 2 week period
    - Persist more than 6 months
    - Histological evidence of choriocarcinoma

6. List the causes of acute abdominal pain in early pregnancy

Ectopic
Miscarriage
Pelvic inflammatory disease
Ovarian cyst accident- enlargement, rupture, bleed, torsion
Renal – cystitis, pyelonephritis, stones
GIT — constipation, colitis, appendicitis,
Musculoskeletal
Psychosocial — Drug-seeking behavior, physical and/or sexual abuse.