The Pregnancy Series: Part 1

EARLY PREGNANCY

with Keertana Anne

What can affect an early pregnancy?

Contents

Miscarriage

Spontaneous termination of pregnancy before 24 weeks' gestation.

Early – before 12 weeks' gestation

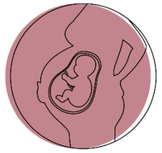
Late – 12-24 weeks' gestation

Presentation – PV **bleeding** and suprapubic cramping pain, with a previous period of amenorrhoea

Risk Factors – increased maternal age; medical problems (poorly controlled diabetes); lifestyle factors (smoking, alcohol use or obesity)

Types of Miscarriage

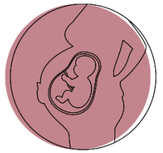
- **Missed miscarriage** – no symptoms; picked up on routine ultrasound
- **Threatened miscarriage** – symptoms; closed cervix; fetus is still alive
- **Inevitable miscarriage** – symptoms; open cervix
- **Incomplete miscarriage** – open cervix; some pregnancy tissue remains
  - **Septic miscarriage** – seen if pregnancy tissues becomes infected
- **Complete miscarriage** – no products of conception left; must have had a previous scan confirming pregnancy in the right place



Miscarriage

Investigations and Examinations

- Pregnancy test
- **Speculum** examination
- **Transvaginal ultrasound scan** – location and viability
  - Fetal heartbeat
  - Crown-rump length (7mm)
- Serum βhCG measurements



Miscarriage

Management

Expectant

Medical

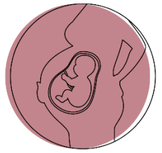
Surgical

Expectant

If confirmed **incomplete** or **missed** miscarriage.

Advice –

- What to expect
- Pain relief
- When to contact the hospital



Miscarriage

Medical

Misoprostol (vaginal)

- Prostaglandin analogue. Softens the cervix and stimulates uterine contractions.

Advice

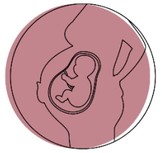
- Side effects – heavy pain, bleeding, vomiting and diarrhoea
- Take pregnancy test 3 weeks after medical management

Surgical

- **Manual vacuum aspiration** – local anaesthetic; outpatient clinic
- Under **general anaesthetic**

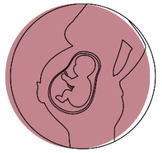
Benefit – rapid resolution of miscarriage symptoms
Risks – bleeding, infection (endometritis), adhesions (Asherman's syndrome), incomplete removal of pregnancy tissue.

Anti-rhesus D prophylaxis given to all rhesus-negative women.



Support for Parents

- Cancel antenatal care appointments
- Discuss any questions they may have
- What happens to the pregnancy remains?
- Offer counselling and support



Recurrent Miscarriage

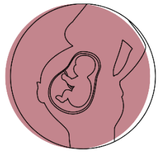
The loss of ≥3 consecutive pregnancies with the same partner.

Risk Factors

- Increased maternal age
- Smoking, alcohol and drug use
- Medication – methotrexate, NSAIDs, aspirin
- Chronic medical conditions
- Consanguineous relationship

Causes

- Antiphospholipid syndrome
- Hereditary thrombophilias
- Chromosomal abnormalities
- Uterine abnormalities



Recurrent Miscarriage

Investigations

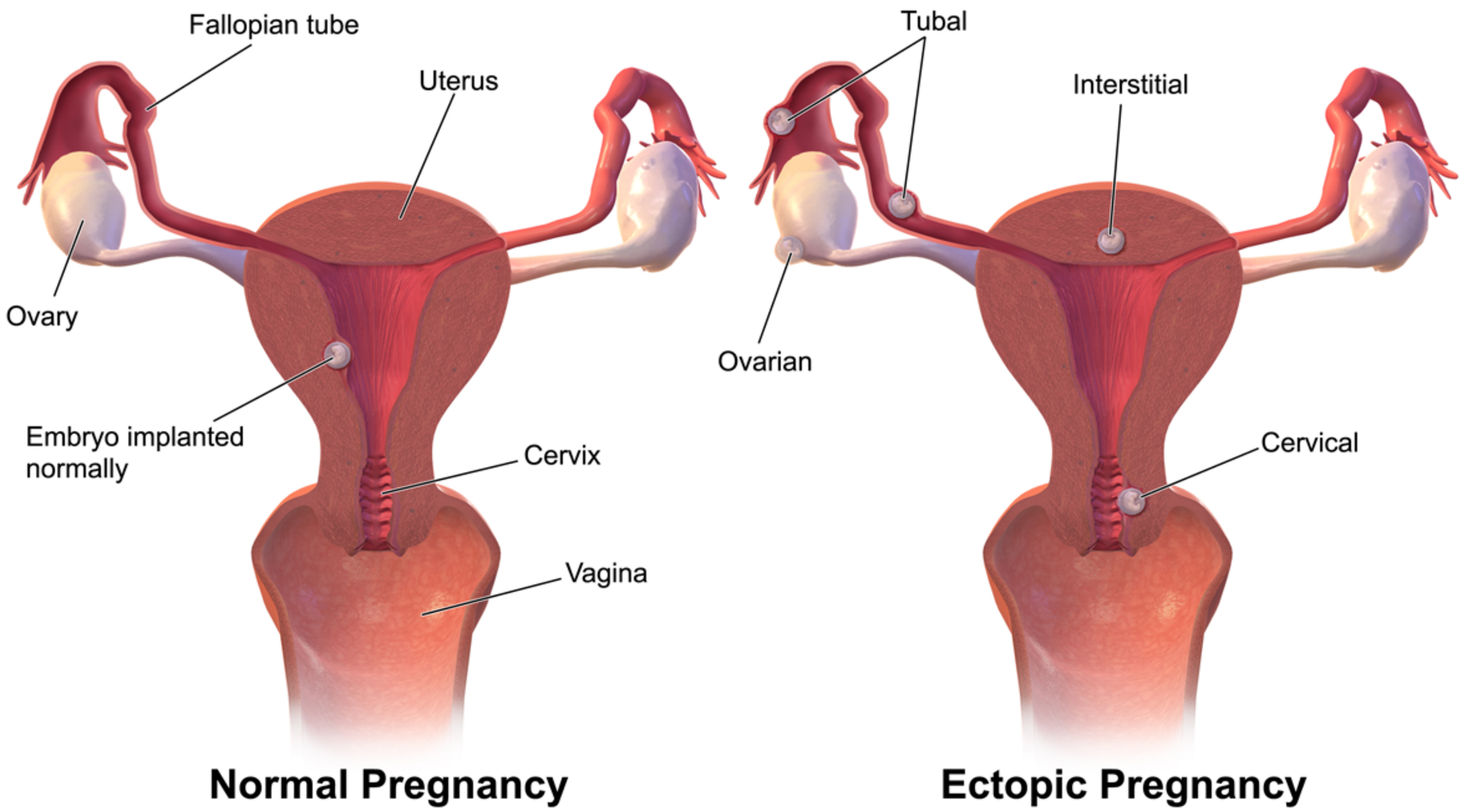
Initiated after ≥**3 first trimester miscarriages** or ≥**1 second trimester miscarriages**.

- Antiphospholipid antibodies
- Testing for hereditary thrombophilias
- Pelvic ultrasound
- Genetic testing – pregnancy tissue; parents.

Management depends on underlying cause.

Recurrent Miscarriage

Ectopic Pregnancy



Ectopic Pregnancy

Presentation

Ectopic Pregnancy

- **Pain** (usually unilateral)
- With or without PV bleeding
- Amenorrhoea
- Shoulder tip pain (haemoperitoneum)
- Haemodynamic instability – dizziness, low BP, collapse

- Rebound tenderness and guarding
- Pelvic and adnexal tenderness
- Cervical motion tenderness

Risk Factors

- Adhesions – PID or endometritis
- Contraceptive devices – IUD, IUS, POP, implant
- Tubal ligation or occlusion
- Pelvic surgery
- Assisted reproduction

Investigations

- Urine βhCG
- **Transvaginal US**
- Serum βhCG
  - If >1500mIU/ml and nothing is seen in uterus, consider PUL
  - If <1500mIU/ml, then re-measure 48h later
    - Viable pregnancy – will double every 48h (>66%)
    - Non-viable pregnancy – will halve every 48h (<50%)
    - Abnormal pregnancy – rate of change is outside these limits

Ectopic Pregnancy

Management

Expectant

Medical

Surgical

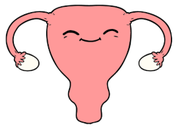
Ectopic Pregnancy

Medical

Patients are stable, well controlled pain and β-hCG levels <1500. Ectopic is unruptured and has no heartbeat.

IM methotrexate (teratogenic; disrupts folate dependent cell division of fetus)

- Monitor hCG levels to make sure they are decreasing.



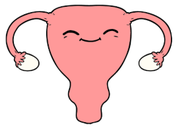
Ectopic Pregnancy

Surgical

Patients are either in severe pain, β-hCG >5000, adnexal mass >34 mm and/or fetal heartbeat visible on scan.

Laparoscopic salpingectomy or **salpingotomy**.

- Must give anti-rhesus D prophylaxis to rhesus-negative women

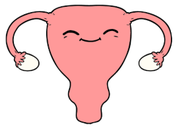


Ectopic Pregnancy

Expectant

Patients are stable, rupture is unlikely and they have minimal/no symptoms.

- **NOT FIRST LINE**
- Wait and watch
- Consider active intervention if symptoms of ectopic occur, or if hCG levels don't decrease appropriately.



Ectopic Pregnancy

Break

Drop any questions in the Q+A!

Pregnancy of Unknown Location

Positive pregnancy test but fetus cannot be seen on transvaginal ultrasound.

- Pregnancy is too early to see on a scan, but is otherwise normal.
- Pregnancy is growing insufficiently because the woman is about to miscarry.
- Ectopic pregnancy.
- Already had a miscarriage.

Hyperemesis Gravidarum

Severe nausea and vomiting in **first trimester** of pregnancy. Caused by **high levels of βhCG**.

Causes

- Primiparous
- High BMI
- Multiple pregnancy
- Molar pregnancy

Hyperemesis Gravidarum

Hyperemesis Gravidarum

Next Steps

History

age; parity and gestation; nature of vomiting; oral intake; weight loss; PMH

Examination

basic observations; signs of dehydration or muscle wasting, abdominal exam

Investigations

Bedside – weight; urine dip
Bloods – U&Es, LFTs, TFTs
Imaging – transvaginal USS to confirm the nature of the pregnancy

LM

Management

Depends on severity

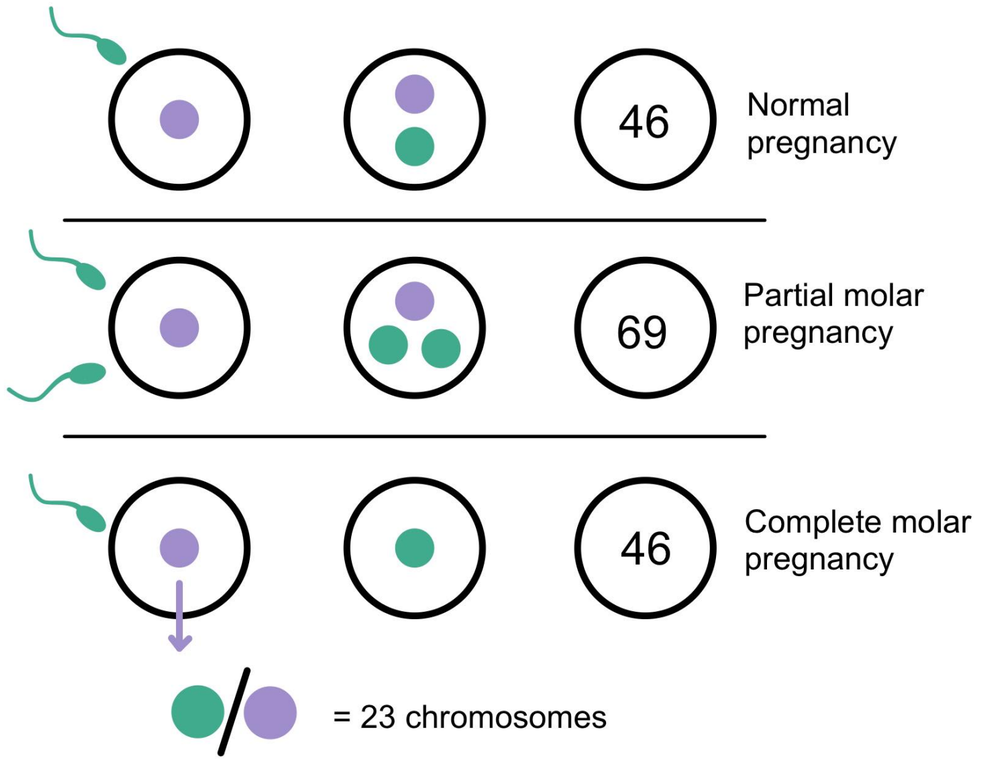
- Hydration – oral or IV
  - Do NOT give IV glucose
- Diet advice – dry, bland food
- Anti emetics (oral or IV) – **promethazine** (1st line) and cyclizine
- Thiamine and folic acid replacement
- Admit as inpatient if severe
- Thromboprophylaxis – LMWH

Hyperemesis Gravidarum

Gestational Trophoblastic Disease

Disorders of trophoblast development.

- Pre-malignant conditions – molar pregnancy (hydatidiform mole)
- Malignant conditions – invasive mole; choriocarcinoma; placental site trophoblastic tumour; epithelioid trophoblastic tumour



Gestational Trophoblastic Disease

Presentation

- Asymptomatic (50%) – picked up incidentally
- Bleeding
- Severe nausea and vomiting
- Pre-eclampsia symptoms
- Large uterus for dates

Termination of Pregnancy

1967 Abortion Act (amended 1990) – 24 weeks' gestation

Signed off by two medical practitioners. Performed by a medical practitioner.

- Risk to the physical or mental health of mother
- Risk to the physical or mental health of any existing children
- Risk to the life of the mother
- Risk that the child born would suffer from great physical or mental abnormalities

Termination of Pregnancy

Procedure

Medical

Surgical

Patient choice

Termination of Pregnancy

Medical

Mifepristone – anti-progestogen
Misoprostol – prostaglandin analogue

Anti-D prophylaxis – gestation ≥ 10 weeks.

Surgical

Tube inserted into uterus, removed using suction.

- Available under local or general anaesthetic.
- Cervical priming required – mifepristone.
- Anti-D prophylaxis

Conscientious Objection

Right of medical staff to refuse participation in abortion for personal belief.

Quiz

Case – Mrs F. 35F. G_3 P_0.

Socrative – ANNE339

Mrs F (35F) has presented to your clinic with 2 days of heavy vaginal bleeding. It has been 5 weeks since her LMP and she has recently had a positive pregnancy test. What examination would be most useful to perform on her?

A. Transabdominal ultrasound scan
B. Speculum
C. Urine pregnancy test
D. Transvaginal ultrasound scan

You perform a speculum examination on her, and note that she has a closed cervix. Which type of miscarriage is possible?

A. Missed miscarriage
B. Incomplete miscarriage
C. Threatened miscarriage
D. Inevitable miscarriage

Unfortunately, Mrs F has a miscarriage. Her and her partner have been trying for a baby for over a year and have experienced 3 first trimester miscarriages. What are the next steps you could take?

Mrs F comes back to your clinic 4 months later, successfully pregnant! She is unfortunately experiencing heavy nausea and vomiting. You diagnose her with Hyperemesis Gravidarum. What is the first medication would you prescribe?

A. Thiamine
B. Ondansetron
C. Cyclizine
D. Promethazine