PODCAST No. 15

INTRODUCTIONS:

FEEDBACK:

TOPIC: Ectopic pregnancy. Thanks to Akende for suggesting this topic

TIP: Always check pregnancy test in women of child bearing age presenting with abdominal/pelvic pain

DISCUSSION:

An ectopic is a pregnancy that occurs anywhere outside the uterus, most commonly the Fallopian tubes.

The rate in the UK is 1 per 100 pregnancies (4 in 100 in ivf). Although the mortality from ectopic pregnancies in the UK is decreasing, STILL 0.2 per 100 ectopic pregnancies result in maternal death.

Anatomy

97% of ectopic pregnancies occur in the Fallopian tubes. The remaining locations include cervical, fimbrial, ovarian and peritoneal sites, as well as previous caesarean section scars. There are a few documented cases of viable pregnancy outside the uterus and tubes but, as a general rule, only an intrauterine pregnancy is viable.

An ectopic pregnancy may also co-exist with intrauterine pregnancy. This is called heterotopic pregnancy. It is a rare event, occurring in 1 in 30,000 pregnancies mainly ivf pregnancies.

Risk factors

Thought to be delay in transport of ovum so any factors that slow movement may predispose to ectopic.
One third of women with ectopic pregnancies do not have risk factors. However, the following increase risk of ectopic pregnancy:

- Assisted reproductive treatments eg (IVF).
- History of pelvic infection mainly from STI's. Pelvic inflammatory disease may cause complete tubal occlusion or delay the transport of the embryo so that implantation occurs in the tube.
- Adhesions from surgery, infection or inflammation from endometriosis.
- Previous tubal surgery. Eg reversal of sterilisation.
- A past history of ectopic pregnancy.
- Intrauterine contraceptive device (IUCD) use, if become pregnant (1 in 1000). Approx half pregnancies will be ectopic.

- Women becoming pregnant whilst using progestogen-only contraceptive methods may also have an increased risk of ectopic pregnancy, although a previous history of ectopic pregnancy is not a contra-indication to use. Risks are lowest for depot injection and implants.

Presentation

Maria a 23 year old presents with pelvic pain in early pregnancy. She is 8 weeks pregnant from her lmp. The pain is situated in the RIF and is constant and getting worse. She has felt light headed and fainted once. She has no pv bleeding.

She has no previous pregnancies. This is a planned pregnancy.

She has no h/o STI's. She had surgery for appendicitis aged 18.

She is on no medication.

History

Ectopic pregnancy starts with implantation-minimal symptoms As progresses fallopian tube is distended, stretches and starts to bleed. Reaches critical size and tube rupture at approx. 5-7 weeks, (I was always told 8-9 weeks).

Be aware that ectopic pregnancy commonly presents in an atypical way, so consider the possibility in women of reproductive age. Consider the need for a pregnancy test even in women with nonspecific signs.

- Symptoms of ectopic pregnancy can resemble those of other more common conditions, including urinary tract infections and gastrointestinal conditions.
- The most common symptoms are:
    - Abdominal pain.
    - Pelvic pain.
    - Amenorrhoea or missed period (beware the 'light' period the month before).
    - Vaginal bleeding, generally light.
- Other symptoms may include:
    - Dizziness, fainting or syncope, Shoulder tip pain, Urinary symptoms, Passage of tissue, Rectal pain or pressure on defecation, Gastrointestinal symptoms such as diarrhoea and/or vomiting.
- Ask about risk factors
- If the ectopic pregnancy has ruptured, bleeding is profuse and there may be features of hypovolaemic shock, including feeling dizzy on standing. Most bleeding will be into the

pelvis and so vaginal bleeding may be minimal and misleading.

Examination

Common signs:

- Pelvic or abdominal tenderness.
- Rebound tenderness.

NB: there is thought to be a possible increased risk of rupture of an ectopic pregnancy following palpation, so internal examination would not normally be performed if ectopic pregnancy is suspected, particularly where there is early access to ultrasound.
Women with a positive pregnancy test and possible ectopic need to be referred to hospital for urgent assessment.

- Pallor, Abdominal distension, Enlarged uterus, Tachycardia and/or hypotension, Shock or collapse.

Maria is pale. Her heart rate is 110bpm and her BP 70/50. Her abdomen is very tender in the RIF with guarding and rebound.
You call for an urgent ambulance and put in a cannula and fluids whilst waiting.

Differential diagnosis

- In threatened miscarriage vaginal bleeding is the predominant feature and pain may come later as the cervix dilates. In ectopic pregnancy, pain usually comes first and if vaginal bleeding occurs it is of much less significance.
- The differential diagnosis is also as for left iliac fossa pain or right iliac fossa pain eg appendicitis/ovarian cysts.

Investigations

A pregnancy test should be performed on all women of childbearing age presenting with lower abdominal pain where pregnancy is even the remotest possibility.

- The most accurate method to detect a tubal pregnancy is transvaginal ultrasound.
- This can identify the location of the pregnancy and also whether there is a fetal pole and heartbeat.
- Human chorionic gonadotrophin (hCG) levels are performed in women with pregnancy of unknown location who are clinically stable. In a woman with pregnancy of unknown location, however, clinical symptoms are of more significance than hCG levels.

Management

Admit as an emergency if the diagnosis of ectopic pregnancy is considered a possibility.

- Anti-D rhesus prophylaxis should be given (at a dose of 250 IU) to all rhesus-negative women who have a surgical procedure to manage an ectopic pregnancy. Women who receive medical treatment for their ectopic pregnancy do not need to receive it.
- Conservative management may be appropriate if the levels of hCG are falling and the patient is clinically well. Repeat hCG levels are performed in these cases. In cases of pregnancy unknown location 2/3 will resolve spontaneously

Medical management (in UK)

- Single-dose methotrexate treatment appears to have similar efficacy to surgical treatment.
- Medical management in the form of systemic methotrexate is offered first-line to those women who are able to return for follow-up and who have the following:
    - No significant pain.
    - Unruptured ectopic pregnancy with an adnexal mass <35 mm and no visible heartbeat.
    - No intrauterine pregnancy seen on ultrasound scan.
    - Serum hCG <1500 IU/L.
- Over 75% of patients will complain of abdominal pain 2-3 days after administration of methotrexate.
- Other side-effects include nausea, vomiting and reversible impaired liver function.
- Women should have blood taken for LFTs and to ensure hCG levels are dropping.
- Contraception should be used for 3-6 months, as methotrexate is teratogenic.
- Clear instruction must be given about the need for follow-up and the ability to return to the ward if there are problems.

Surgical management

- Surgery should be offered to those women who cannot return for follow-up after methotrexate or to those who have any of the following:
    - Significant pain.
    - Adnexal mass ≥35 mm.
    - Fetal heartbeat visible on scan.
    - Serum hCG level ≥5000 IU/L.
- A laparoscopic approach is preferable. A salpingectomy should be performed if the

opposite tube is healthy and unless the woman has other risk factors for infertility. In this case a salpingotomy (tube preserved) should be undertaken.

Complications

- Nowadays, ectopic pregnancy can often be diagnosed before the woman's condition has deteriorated, resulting in ectopic pregnancy being less likely to be life-threatening disease.
- Failure to make the prompt and correct diagnosis of ectopic pregnancy can result in tubal or uterine rupture (depending on the location of the pregnancy), which in turn can lead to massive haemorrhage, shock, disseminated intravascular coagulopathy (DIC), and even death.
- Complications of surgery include bleeding, infection, and damage to surrounding organs, such as the bowel, bladder and ureters and to the major vessels nearby.

Prognosis

- With accurate determination of very low hCG concentrations and ultrasound, >85% of women are now diagnosed before tubal rupture, which has led to medical therapy and laparoscopic surgery with tubal preservation and the potential for future fertility.
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- The risk of another ectopic pregnancy is about 10-20%.
- The chance of subsequent intrauterine pregnancy is about 64-76%.

Maria has emergency surgery with a salpingectomy. She requires a blood transfusion. Luckily she makes a good recovery and goes on to have a successful pregnancy.

GOODBYES: