Ectopic pregnancy

An ectopic pregnancy develops outside the uterine cavity. The sites are shown in the figure, but most (96%) are in the fallopian tube.

Causes

Anything that slows the passage of the fertilised oocyte down the fallopian tube can cause a tubal ectopic pregnancy. Previous tubal infection, an intrauterine device in place, and late fertilisation are quoted causes, but in most ectopic pregnancies no cause is found.

Presentation

A tubal ectopic pregnancy may either rupture through the wall (more common with isthmal implantations) or leak a little blood from the lateral end of the fallopian tube (with ampullary or fimbrial implantations). After a variable number of weeks of amenorrhoea vaginal bleeding can occur.

With rupture there is a brisk peritoneal reaction and the woman may fall to the ground as though kicked in the stomach. She quickly becomes very shocked. The abdomen is tender with guarding and rebound tenderness, and vaginal examination causes intense pain on touching the cervix.

A more gradual leak causes irritation of the pouch of Douglas. The woman goes to her doctor complaining of vague, low abdominal pain, sometimes with vaginal bleeding occurring after the pain. The abdomen may be uncomfortable in the suprapubic area, and a very gentle vaginal assessment may show a tenderness in the pouch of Douglas or in the adnexa on one side.

The differential diagnosis includes an abortion or any other cause for a sudden release of blood into the peritoneal cavity, such as a bleeding vessel over an ovarian cyst. Inflammatory conditions such as appendicitis may mimic a leaking ectopic pregnancy. Ectopic pregnancy should always be considered in any cases of lower abdominal pain for an unruptured ectopic pregnancy, leaking a little blood over the course of some days, is hard to diagnose.
A gestational trophoblastic disease nearly always means excision of the damaged tissue. This is done by clamping off the tube on either side as blood supply is usually in the mesenteric border of the tube in the broad ligament.

Management

The management of a woman with a ruptured ectopic pregnancy is straightforward. She should go to hospital immediately, if necessary accompanied by her general practitioner. Intravenous treatment may be required in the home, and in severe cases a flying squad may be required. Once in the hospital surgery should be immediate and the area bleeding should be clamped off. The surgeon may have to remove the fallopian tube, but this would depend on how much damage has occurred. If some part of the tube can be left behind it is helpful to the woman.

A leaking tubal pregnancy is harder to diagnose, such cases being usually referred to outpatient departments in a more leisurely fashion. If the diagnosis is suspected laparoscopy is the best test; ultrasonography is not exclusive, although fluid in the pouch of Douglas and no intrauterine pregnancy in a woman with 6-8 weeks' amenorrhoea is highly suggestive. At laparoscopy the swollen area of the tube can usually be seen and little blood may come from the lateral end. Conventional surgeons would remove the affected area of the tube at a laparotomy, but now many gynaecologists treat non-ruptured ectopic pregnancies through a laparoscope. Embryo death can be ensured by injection, or a salpingostomy can be performed using laparoscopy directed cutting and diathermy equipment when the conceptus and decidua are sucked out; the results of such minimalist surgery are as good as those of more conservative surgery, with the time spent in hospital and the emotional effects on the woman's life being much reduced.

Gestational trophoblastic disease

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Chromosomal changes in the fertilised oocyte lead to degeneration of the stem blood vessels in the villi in very early pregnancy, so producing a vast overgrowth of vesicles inside the uterus. This is a hydatidiform mole, and commonly no embryo is found. It is usually benign but in less than 10% of cases it develops into an invasive mole or even a gestational choriocarcinoma.

Although rare in the United Kingdom (0.6 per 1000 pregnancies), hydatidiform moles and their malignant sequelae seem to reported more commonly in other parts of the world such as in the Pacific region (2.0 per 1000 pregnancies).

Presentation

A woman with a mole will bleed, sometimes heavily, after eight weeks of gestation. She is often unwell with signs of anaemia and excessive vomiting. Proteinuric hypertension can occur as early as eight weeks. After 12 weeks of gestation the uterus often feels much bigger than expected for dates but not if fetal parts can be felt or fetal heart heard. Occasionally the woman may pass vesicles through the vagina; this is diagnostic but rarely occurs.

Moles are diagnosed either from an excessively high estimation of human chorionic gonadotrophin in the urine or by ultrasonography, when a characteristic picture is seen.

The differential diagnosis must include twins with a threatened miscarriage, but ultrasonography, which should be readily available to most general practitioners, gives the answer immediately.
Management

Once diagnosed a mole should be evacuated quickly. The woman should be admitted to hospital and a suction curetteage performed under anaesthesia with the protection of an oxytocin drip. All tissue is sent to the laboratory for examination of its neoplastic potential.

After a mole all women should be registered for follow up at one of the supraregional trophoblast disease centres, where human chorionic gonadotrophin concentrations in urine or blood can be measured. If these are high at six weeks chemotherapy is recommended to prevent subsequent malignancy.

Other causes of vaginal bleeding

Bleeding may come from local problems in the vagina or cervix.
- Cervical erosion is common in pregnancy; bleeding is not profuse
- Vaginal and cervical infections with monilia can cause mild bleeding
- Adenomas and polyps of the cervix become more pronounced during pregnancy. They may bleed on stimulation
- Carcinoma of the cervix is rare but important in women of childbearing age. If it cause bleeding on stimulation and examination with a speculum reveals the cause. If there is any doubt a biopsy must be performed under anaesthesia even when a woman is pregnant
- A general maternal disease such as blood dysplasia, von Willebrand’s disease, or leukaemia may cause symptoms in rare cases.

Lesions of the cervix or vagina may cause bleeding in early pregnancy

I thank Mr Rashni Patel for the ultrasound pictures. The figure showing treatment of a hydatidiform mole is reproduced by permission of Churchill Livingstone from Obstetrics, edited by A Turnbull and G Chamberlain.

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MIRROR OF MEDICINE

When the Journal was launched there was no effective lobby for public health legislation. However, Edwin Chadwick, who was secretary to the Poor Law Commission, was at work on his ground breaking inquiry into the “Sanitary Condition of the Labouring Population of Great Britain.” Chadwick produced what has been called “perhaps the greatest of the nineteenth century Blue Books.” When the report was published in 1842 it “conclusively established the incontrovertible link between environment and disease.” Although historians now tend to see Chadwick as the man who got the public health movement going, the Journal’s first comment on the report was one of surprise that “so difficult and complex an investigation was entrusted to a gentleman completely ignorant of the subject [public health] submitted to his inquiry.” The consequence, it claimed, was a report which lacked clarity and method and also overlooked some important causes of disease such as mal-nutrition. The Journal evidently felt that the inquiry should have been undertaken by a medical man, though it conceded that the report “is creditable to the industry of its author,” and that “a mass of highly important and useful information has been collected.” Indeed, one leading article pointed out (correctly) that much of the report’s value was attributable to the evidence provided by the Poor Law Commission’s unpaid medical correspondents.

In November 1842 the Journal carried a leading article drawing on that part of Chadwick’s report which showed the correlation between social class, life expectancy, and place of domicile. Whereas a professional man, a gentleman, or the family of such living in Bath or Rutland could expect to live into their 50s, their counterparts in Liverpool could expect to die at 35. Labourers and their families in Liverpool could anticipate no more than 15 years of life. The Journal believed that the causes of premature death were largely preventable and called on politicians “to correct . . . that fatal apathy which closes its eyes while nations are committing suicide.”

In December the Journal returned to the subject, this time concentrating on bad housing and calling for “the enactment of some general provision by which the habitations of the poor may be rendered as far as practicable free from all extraneous sources of disease, and the rendering of the poor-law protective of their interests rather than oppressive to them in their calamities.” It urged a reallocation of government expenditure: money being spent in upholding British honour in Syria, Canada, Afghanistan, and China could, it was suggested, “be at least equally well bestowed in improving the condition and adding to the comforts of the artisan and laborer [sic] among our home population.”

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