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Ectopic pregnancy

The purpose of this leaflet is to provide an overview of the nature, risk factors and treatment options of ectopic pregnancy.

Fertilisation takes place in the fallopian tube. The fertilised egg must travel down the fallopian tube into the uterus where it embeds itself and begins to grow. Sometimes, a fertilised egg embeds itself outside the uterus and an ectopic pregnancy occurs. This usually happens when the fallopian tube is damaged by inflammation and does not function properly. Around 20 out of 1000 pregnancies are ectopic. Most ectopic pregnancies (98%) occur in the fallopian tube.

Uncommon implantation sites of ectopic pregnancy include the ovary, the cervix, a uterine scar (e.g. from a prior caesarean delivery), the uterine corner, the rudimentary horn of the uterus (uterine malformation) and the abdominal cavity.

In rare cases, both intrauterine and extrauterine pregnancy occur simultaneously. This is called a heterotopic pregnancy (an incidence of 1 in 3900 pregnancies).

Risk factors

- Previous ectopic pregnancy; if the pregnancy has been monitored, the patient has received oral treatment or the fallopian tube has been preserved during surgery, the risk of recurrence is 15%.
- Previous pelvic inflammatory disease or salpingitis.
- Certain birth control methods – intrauterine device, sterilisation (the incidence of failure of sterilisation is low; however, if pregnancy does occur, it is most likely an ectopic pregnancy).
- Infertility and artificial insemination.
- Multiple sexual partners and/or early sexual debut – the risk of infections and therefore the higher risk of damage to the fallopian tubes.
- Smoking – smoking increases the risk of ectopic pregnancies because smokers may have decreased immunity, which may increase the risk of infections and damage to the fallopian tubes.
- Age >35 years.

Signs and symptoms

- At first, an ectopic pregnancy may not cause any signs or symptoms.
- The early symptoms of an ectopic pregnancy are similar to those of a normal pregnancy: delayed period, breast tenderness and nausea.
- The first signs may include light vaginal bleeding and abdominal pain (such symptoms may also occur during intrauterine pregnancy).
- Symptoms typically occur six to eight weeks after the last menstrual period but may occur earlier or later.
- Rupture of an ectopic pregnancy can lead to symptoms such as intraabdominal bleeding and severe abdominal pain radiating to the shoulders as well as a strong feeling of weakness and fainting.

Diagnosis

- hCG (human chorionic gonadotropin) levels, blood type and RhD status are determined (if not previously known).
- A vaginal examination is performed.
- An ultrasound helps to determine the exact location of the pregnancy and assess the amount of free fluid (blood) in the abdominal cavity.
- Sometimes definitive diagnosis can be time-consuming and complicating (especially in early pregnancy), often requiring multiple tests and examinations.

Treatment

An ectopic pregnancy cannot progress normally.

An ectopic pregnancy can lead to life-threatening bleeding.

Sometimes (in 44-69% of cases), an ectopic pregnancy resolves spontaneously and the tissue absorbs by itself.

The treating physician will decide on a patient-by-patient basis whether the patient requires treatment or is allowed to remain under observation (expectant management).

Expectant management is indicated in the following cases:

- the patient has no significant complaints
- blood hCG levels are low and declining
- the exact location of the pregnancy is unclear
- the patient can attend regular follow-up appointments
- the patient can go to the hospital immediately if any symptoms occur

Medication

An ectopic pregnancy is treated with a medication called methotrexate. Methotrexate (MTX) affects actively proliferating tissues, including the pregnancy tissue.

MTX is used in uncomplicated cases of ectopic pregnancy, i.e. when:

- the patient is in a stable general condition;
- blood hCG levels are not too high;
- the ectopic mass is small and there is no presence of foetal cardiac activity;
- the patient can attend regular follow-up appointments; and
- the patient can go to the hospital immediately if any symptoms occur.

Approximately 7% of patients treated with MTX require surgical removal of the ectopic growth.

MTX is contraindicated if:

- there are significant abnormalities in blood test results;
- the patient has immunodeficiency, an active lung disease or a gastric or duodenal ulcer;
- the patient is hypersensitive to MTX;
- a heterotopic pregnancy is present;
- the patient is breastfeeding; or
- the patient cannot attend follow-up appointments or go to the hospital immediately if any symptoms occur.

Following injection of MTX, blood hCG levels should be monitored until they return to normal.

Administration of MTX

- Before administering MTX, the patient must sign an informed consent form.
- If an ectopic pregnancy occurs in the fallopian tube, MTX is usually injected into a muscle (e.g. into the upper arm). Sometimes, it is injected directly into the pregnancy site (if the pregnancy occurs in the cervix or uterine scar).
- In most cases, a single dose is sufficient (the dosage is calculated based on the patient's weight); however, sometimes (in *ca* 15-20% of cases) a repeated injection is required.

Side effects of MTX

- Side effects are usually mild and self-limiting.
- Side effects may occur in up to 30-40% of patients.
- As MTX acts on soft tissue, mouth ulcers and stomatitis can develop. Regular oral hygiene helps to prevent these side effects. Mouth ulcers are most likely to develop in the first 1-2 days after the injection.
- Exposure to sunlight should be avoided and sun cream should be used as the skin may become sensitive to sunlight due to MTX.
- Hair loss is a mild and transient side effect of MTX. It is extremely rare and occurs because MTX works on actively proliferating cells.
- Nausea and vomiting are rare side effects that may last for 1-2 days. Drink plenty of water to prevent becoming dehydrated.
- Liver and kidney function can be affected as MTX is metabolized in the liver and excreted via the kidneys.
- Very rarely, dark coloured stool, blood in the urine or faeces, vomiting blood, diarrhoea, joint pain, swelling of the legs and acne may occur.

What should be avoided while taking MTX

- Avoid drinking alcohol until hCG levels have returned to normal.
- Concomitant use of MTX and nonsteroidal anti-inflammatory drugs (e.g. ibuprofen, diclofenac, aspirin) should be avoided as this is associated with an increased risk of serious complications.
- Vaccination (especially with live vaccines) should be avoided.
- After treatment, pregnancy should be avoided for three to six months, using a condom or other methods of contraception, as MTX may cause foetal abnormalities.
- Folic acid or vitamins containing folic acid should not be used during the treatment as folic acid reduces the effect of MTX.
- MTX is excreted in breast milk and therefore breastfeeding is not recommended.
- Vaginal intercourse is not recommended as it increases the risk of rupture of the fallopian tube.

Surgery

If expectant management or treatment with MTX is not effective or indicated, surgical intervention is required. In most cases, laparoscopic surgery is performed, during which either the pregnancy tissue or, if necessary, the fallopian tube along with the pregnancy tissue is removed. The chance of a subsequent successful pregnancy is the same for both options.

Recommendations

In ectopic pregnancies, regardless of the treatment chosen, discomfort and mild abdominal pain are common; paracetamol, an over-the-counter analgesic, may be used if needed. In the case of a severe abdominal pain or feeling faint, immediately seek emergency care at the Women's Clinic.

Minor vaginal bleeding is also common and can last for several weeks. This is due to the breaking down of the lining of the womb, which grew thick in anticipation of a fertilised egg being implanted.

In the case of bleeding, sanitary pads should be used instead of tampons in order not to increase the risk of infection.

You need to attend follow-up appointments until recovery.

ITK1051
This information material has been approved by the Women's clinic on 01.01.2025.