

Heterotopic Pregnancy

Patient Information Series – What you should know, what you should ask.

This leaflet is to help you understand what a heterotopic pregnancy is, how a heterotopic pregnancy develops, what the symptoms are, and the recurrence risk for future pregnancies.

What is a heterotopic pregnancy?

Normally, an egg fertilizes sperm in the tube, and then the embryo moves to the uterine cavity. If the embryo can't reach the normal implanted location, the embryo will implant and develop outside the uterus causing an ectopic pregnancy. Heterotopic pregnancy is considered as a multiple pregnancy, with one embryo located in the uterus and other located outside the uterus. Heterotopic pregnancy is extremely rare, estimated to occur in about 1/30,000 spontaneous pregnancies. The most common location of ectopic pregnancy is the fallopian tube, but it can occur in the cervix, ovary, previous cesarean section scar or even in the abdomen.

How does a heterotopic pregnancy happen?

The actual cause of heterotopic pregnancy is still unknown. However, there are two hypotheses for heterotopic pregnancies:

- Firstly, two eggs may be independently fertilized by two different sperm cells at the same time but two separated embryos implant in different locations, one in the uterus and another outside the uterus, leading to heterotopic pregnancy.
- Secondly, after an ectopic pregnancy has already developed, another egg can be fertilized and implanted into the uterine cavity, leading to heterotopic pregnancy.

What are the symptoms of a heterotopic pregnancy?

The symptoms of heterotopic pregnancy are variable and not specific, however around 50% of patients are asymptomatic. Symptoms could include:

- amenorrhea (absence of menstrual period) is a common symptom, but sometimes you can confuse abnormal bleeding with a menstrual period.
- Lower abdominal pain: it can happen on one side or both sides, intermittently or continuously. This symptom has several levels: dull pain, sharp or severe pain.
- Shoulder-tip pain may occur due to blood leaking into the abdomen. It is a sign that the condition is getting worse.
- Vaginal bleeding often occurs but not always. It is different from the normal period and may be lighter or darker.
- If the ectopic pregnancy ruptures and causes internal bleeding, you will suffer severe sharp pain, and perhaps shock due to significant blood loss. This can cause various symptoms

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such as clammy skin, rapid breathing, rapid pulse, low blood pressure, and unconsciousness. Any of these symptoms would be considered a medical emergency and is recommended to contact your healthcare provider or go to the emergency room immediately.

How is a heterotopic pregnancy diagnosed?

Diagnosis of heterotopic pregnancy can be challenging. Most heterotopic pregnancy occurs between five and ten weeks of pregnancy. When you come to the hospital with amenorrhea, lower abdominal pain, or vaginal bleeding your symptoms can be mistaken for other early pregnancy complications due to the co-existence of an intrauterine pregnancy. Diagnosis of heterotopic pregnancy will be made based on:

- **Physical examination:** The doctor can discover some significant signs on pelvic examination that might lead to the diagnosis of heterotopic pregnancy. These signs include localizing a specific area of pain or tenderness, irritation of the lining of the abdomen, or identifying an enlarged uterus or mass in the ovaries.
- **β hCG measuring:** β hCG (beta-human chorionic gonadotropin) in your blood may not be helpful in establishing the diagnosis of heterotopic pregnancy due to the co-existence of the intrauterine pregnancy.
- **Transvaginal ultrasound:** (where the probe is gently inserted in your vagina) is an important and useful tool in the diagnosis of heterotopic pregnancy. The doctor can identify this condition if the images show the presence of an intrauterine gestation sac coexisting with an ectopic pregnancy containing an embryo or a yolk sac. In some cases, ectopic pregnancy doesn't have an embryo or yolk sac, the diagnosis will be more difficult and challenging. A condition called hemorrhagic corpus luteal cyst can also look and feel like a heterotopic pregnancy, making diagnosis challenging.

What are the things to watch for?

The main risk of heterotopic pregnancy comes from the existence of ectopic pregnancy. The common location of ectopic pregnancy is fallopian tube and much rarer locations can include the cervix ovary, previous cesarean scar, or even the abdomen. None of these organs have enough capacity and nurturing tissue to support a developing pregnancy.

As the fetus grows, the pregnancy will eventually rupture and lead to internal bleeding. Symptoms of ruptured ectopic pregnancy include severe abdominal or pelvic pain, collapse, or shock. If you have any suspected symptoms, it is advised to go to your nearest medical department for immediate treatment.

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What are the treatment options?

The goal of treatment of heterotopic pregnancy is to terminate the ectopic pregnancy while minimizing the threat to intrauterine pregnancy. There are three ways to treat heterotopic pregnancy:

1. Expectant management (watch and wait)
2. Medical treatment with injection of a substance into ectopic pregnancy to make it regress.
3. Surgical treatment (laparoscopy or laparotomy).

If you come to the hospital in a threatening-life condition due to a ruptured ectopic pregnancy, urgent surgery will need to be performed. If you are in stable condition, the doctor will discuss the available treatments with you based on the location and size of the ectopic pregnancy and your desire to have a baby.

When choosing expectant or medical treatment, the doctor will provide you with the potential risks, and advise you to come to the hospital immediately if you have any signs of ruptured ectopic pregnancy.

What are the risk factors?

Heterotopic pregnancy is extremely rare in a spontaneous pregnancy. The risk of this condition is 30-60 times higher if your pregnancy is achieved following assisted reproductive technique (ART). Similar to a straightforward ectopic pregnancy, tubal pathologies such as infection, tubal surgery, previous ectopic pregnancy or sterilization are a major risk factor for this condition.

Will it happen again?

The chance for recurrence of a heterotopic pregnancy is extremely low.

What other questions should I ask?

- When is my next follow-up visit?
- What are my chances of preserving the viable intrauterine pregnancy?
- Will I need to follow any special precautions if I become pregnant again?
- How long should I wait before trying to become pregnant again?

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