**Ectopic Pregnancy**

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**ABSTRACT**

## Pregnancy-related deaths are brought on by an ectopic pregnancy. From 4.9/1000 pregnancies in 1970 to 9.6/1000 pregnancies in 1992, it has an increasing incidence. Although the cause of this increase is not entirely understood, it has been suggested that factors such as pelvic inflammatory disease (PID), ovulation-inducing medications, prior abdominal-pelvic operations, and intrauterine contraceptive device use may have contributed. Acute EP symptoms include short-term amenorrhea (5-8 weeks), irregular, dark-blooded vaginal bleeding (spotting), and soreness in the abdomen and shoulder blades. Chronic symptoms include intense pain from prior attacks that has subsided, amenorrhea, dull, agonizing lower abdomen discomfort, vaginal bleeding, dysuria, frequent urination or retention of urine, and rectal tenesmus. Several tests need to be run in order to identify an ectopic pregnancy. This could involve a pelvic examination and pregnancy confirmation. The Human Gonadotropin (HCG) level in the body during pregnancy is one of these diagnostics, along with blood and urine testing. HCG levels drastically rise when a fertilized egg implants in the uterus, and an ultrasound can be used to determine where the fertilized egg has implanted, therefore a low level may indicate an ectopic pregnancy. In order to treat an ectopic pregnancy, antimetabolites like methotrexate are used. Salpingectomy is a surgical procedure where the affected tube is removed if there is significant damage or bleeding. Salpingotomy is a procedure where the ectopic pregnancy is removed from the tube by making a small cut while leaving the tube intact. Early detection and treatment of ectopic pregnancy can avert significant problems.Women and their doctors can closely monitor the first few weeks of a pregnancy if they have one or more EP risk factors. Due to early detection through the use of increasingly sensitive techniques such hormonal testing, transvaginal sonography, and laparoscopy, there is an increase in ectopic pregnancies

1. **Introduction**

Due to its peculiar clinical presentation, an ectopic pregnancy presents a challenge to obstetricians and gynecologists. The vast range of clinical manifestations, from asymptomatic instances to acute abdominal and hemodynamic shock, make the diagnosis of ectopic pregnancy challenging. Because of its rising prevalence and effects on women's fertility, an ectopic pregnancy is becoming more significant. Pregnancy-related deaths are caused by ectopic pregnancies. From 4.9/1000 pregnancies in 1970 to 9.6/1000 pregnancies in 1992, it has an increasing incidence. Although the cause of this increase is not entirely understood, factors such as pelvic inflammatory disease (PID), ovulation-inducing medications, prior abdominal-pelvic operations, and intrauterine contraceptive device use have been suggested as potential contributors. Although ectopic pregnancy diagnoses have increased over the past few decades, ectopic pregnancy ruptures have decreased in frequency. Early detection lowers the risk of tubal rupture and enables the use of more conservative medical interventions.

**1.1 Risk factors**

 The risk factors include:

* Previous ectopic pregnancy
* Sexually transmitted infections such as gonorrhoea or chlamydia
* Undergone fertility treatment
* In rare cases, when IUDs are used for birth control
* Smoking

**1.2 Causes**

 Exact cause is not known, it is believed that the following conditions can cause ectopic pregnancy:

* Hormonal factors
* Damaged fallopian tubes by either previous injury or surgery
* Genetic abnormalities
* Abnormal development of fallopian tubes or other reproductive organs

**1.3 Symptoms**

The symptoms of EP could be acute, like

* Short period of amenorrhea (5–8 weeks)
* Intermittent scanty vaginal bleeding of dark blood (spotting)
* Abdominal and shoulder-tip pain.

The chronic symptoms including

* Previous attack of acute pain
* Amenorrhea
* Dull aching lower abdominal pain
* Vaginal bleeding
* Dysuria
* Frequency of micturition or retention of urine
* Rectal tenesmus.

The diagnosis of acute EP, a frequent clinical issue, combines clinical, sonographic, and laboratory evidence. A hematocele containing blood, clots, and trophoblastic tissue that can be active or inactive is hypothesized to form as a result of modest recurring tubal pregnancy ruptures, which are thought to cause chronic EP, which is a more common condition. An inflammatory reaction is brought on by the hematocele, which is surrounded with adhesion. Other research revealed that the presenting medical and surgical histories of women who came acutely or chronically were similar. The theoretical risk factors for EP, in instance, were identical between the two groups; they both had histories of pelvic operations, tubal ligation, STDs, or pelvic infections.

**1.4 Diagnosis**

To diagnose an ectopic pregnancy, there are several tests to perform. This may include a pelvic exam and confirmation of pregnancy. These tests include:

* **A urine test: For this test, you must either urinate on a test strip or into a cup, after which a test strip is dipped into the urine sample.**
* **A blood test: to measure the amount of the hormone human gonadotropin (HCG) in a pregnant woman's body. Due to the rapid rise in HCG levels that occur when a fertilized egg implants in the uterus, a low amount may signify an ectopic pregnancy.**
* **An ultrasound exam: Using sound waves, an ultrasound creates a picture of the interior organs of the body and reveals the location of the implanted fertilized egg.**

## MANAGEMENT AND TREATMENT

## 2.1 Antimetabolite (Methotrexate)

An ectopic pregnancy may be treated with this medication. By interfering with folic acid in your body, it prevents cells from dividing as well as the growth of the fertilized egg, ending the pregnancy. This medication is injected.

**2.2 Surgical management**

During a laparoscopy, a general anesthesia is used. A small (approximately 1 cm long) incision is made in your belly button, a laparoscope is inserted through it to examine your pelvis, and if an ectopic pregnancy is found, it may also require two to three more small incisions in the stomach. There are two options, however it will depend on how much the afflicted tube has been hurt.

* Salpingectomy - The afflicted tube will be removed if there is significant bleeding or damage.
* Salpingotomy - If there is little damage, the ectopic can be removed from the tube by making a little cut while leaving the tube unharmed.

Under general anesthesia, some women do require open surgery (laparotomy) through a wider incision in the lower abdomen. When major internal bleeding is detected, it is frequently carried out. You could need a blood transfusion to replace lost blood if there is significant bleeding before or during surgery.

### **2.3 Prevention**

Women generally cannot prevent EP, but they can avoid catastrophic problems by getting treatment and diagnosis as soon as possible. Women and their doctors can closely monitor the first few weeks of a pregnancy if they have one or more EP risk factors. Reducing the risk of STIs like gonorrhea and chlamydia may make it more likely for women to experience an ectopic pregnancy. A woman may lower her risk of an ectopic pregnancy if she lowers her risk of developing one of these illnesses. Furthermore, it's crucial to get treatment as soon as possible if women do contract STIs. The earlier those women receive treatment, the lower the danger that they would have inflammation, which could harm their reproductive system and raise their risk of developing EP. Abdominal pain, difficult urination, vaginal discharge, abnormal vaginal bleeding, vaginal odor, and pain during sex are all typical STI symptoms. On the other side, smoking might make EP more likely. To lower the risk, women should stop smoking before attempting conception. It's interesting to note that intraperitoneal sperm transmigration only happens in around half of spontaneous human pregnancies. Salpingectomy should be the first line of surgical treatment for women with unilaterally damaged Fallopian tubes in order to reduce the chance of ectopic tubal pregnancy rather than attempting tubal salvage and repair.

# **Conclusion**

Ectopic pregnancy is a clinical issue that is frequently encountered in obstetrics, and the ability to correctly detect and treat ectopic pregnancy is crucial. Using HCG levels and ultrasound, the diagnosis of ectopic pregnancy is frequently a complex process. Due to early detection through the use of increasingly sensitive techniques such hormonal testing, transvaginal sonography, and laparoscopy, there is an increase in ectopic pregnancies. Encourage women to undergo early identification of EP, which can be handled medically or surgically, after the diagnosis of ectopic pregnancy has been made.

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