Ectopic Pregnancy Complications in Women: Review

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**ABSTRACT**

Ectopic pregnancy is implantation of a fertilized egg outside the uterine cavity or endometrial cavity, almost all ectopic pregnancies are implanted in the fallopian tube, also called as “tubal pregnancy”. Reasons for ectopic pregnancy are unknown.

**INTRODUCTION**

Ectopic pregnancy is described for the first time in the 11th Century and later it was described as pregnancy with complications. Ectopic pregnancy is life-threatening and which leads to maternal death. Ectopic incidence is higher in age group between 35 to 44 years. Etiology includes tubal damage from different reasons like inflammation, infections and surgical interventions. The risk factors include fallopian tube surgery, previous ectopic pregnancy, genital infections, smoking, age, OC only with progestin, multi-parity, previous abortion [1]. Diagnosis of ectopic pregnancy can be difficult. Now days, in developed countries, diagnosis relies on a combination of ultrasound scanning and total beta-human chorionic gonadotropin (β-hCG) measurements. Ectopic pregnancy is one of the few medical conditions that can be managed by either medical management method or surgical management method [2].

**Types of Ectopic Pregnancy**

In a normal pregnancy, your ovary releases an egg into your fallopian tube. Egg meets with a sperm, the fertilized egg moves into your uterus through fallopian tubes to attach to its lining of uterus. But In Ectopic Pregnancy fertilized egg cannot implant in Uterus. There are various types of ectopic pregnancies based on the implantation area [3].

1. Tubal pregnancy
2. Non-tubal ectopic pregnancy
3. Heterotopic pregnancy

**Tubal pregnancy**
Almost all ectopic pregnancies are occurred in the fallopian tube, which is called also as “tubal pregnancy”. Tubal pregnancy takes place when the fertilized egg has implanted inside the fallopian tube. This is the most regular type of ectopic pregnancy. Tubal pregnancy further can be classified according to in which area inside the fallopian tube the pregnancy takes place \(^4\),

1. in the fimbrial end.
2. in the ampullary section.
3. in the isthmus tube.
4. in the cornual and interstitial part of the tube.

**Non-tubal ectopic pregnancy**

It is a rare and subgroup of ectopic pregnancy, fertilized egg implanted at sites other than the Fallopian tube \(^5\). Non-tubal ectopic pregnancies are difficult to treat. Surgical treatment is complex, and follow-up after medical treatment is usually protracted \(^8\).

**Heterotopic pregnancy**

Heterotopic pregnancy is an unusual clinical and probably threatening condition in which intrauterine (IU) and extra-uterine pregnancies occur the same time. Heterotopic pregnancy is a life-threatening condition and can be easily pass without any complications, with early diagnosis \(^6\-^8\).

**Symptoms for Ectopic pregnancy**

Nanoparticles are defined as colloidal structures with a varying size range of 1 - 1000 nm. Chitosan nanoparticles can be prepared by various methods including:

1. Ionotropic gelation method
2. Microemulsion method
3. Emulsification solvent diffusion method
4. Emulsion droplet coalescence method
5. Reverse micellisation
6. Desolvation

Usually Symptoms of ectopic pregnancy grow in between 4th and 10th weeks of pregnancy. Some women don't have any symptoms at early stage of pregnancy. They may not find out they have an ectopic pregnancy until the scan shows the problem or they develop more serious symptoms later on. Also it leads to rupture of pregnancy area/tubes \(^9\-^12\).

Main symptoms for ectopic pregnancy are vaginal spotting during pregnancy, abdominal pain, Shoulder tip pain, Discomfort during urination and Bowel moment problem \(^10\).

**Vaginal spotting**

Most ectopic pregnancies establish in the fallopian tube, egg travels through to reach the uterus. Bleeding may occur when the embryo implants in fallopian tube, it often does when an embryo first implants in the uterus. This type of bleeding may appear normal embryo implantation in the uterus because there is no way to differentiate it from uterine bleeding without a proper diagnosis like ultrasound scanning, which shows no embryo in the uterus \(^13\-^16\). If an ultrasound shows the pregnancy is ectopic, immediate treatment required to stop the further growth of embryo. Otherwise it leads to rupture the fallopian tube \(^11\).

**Abdominal pain**

Experience the abdominal pain during Ectopic pregnancy is a common thing, typically low down on one side. The pain may develop suddenly or increased slowly, and may be persistent of come and go \(^12\).

**Shoulder tip pain**

Shoulder tip pain is an uncommon pain, pain at shoulder ends and at arm begins. We cannot explain the reason behind why it is occurs, but it can be a symptom of an ectopic happen some internal bleeding, so medical advice is necessary if you experience it \(^13\-^16\).
Discomfort during urination and Bowel movement problem

Experience pain when going for urination because of urinary tract infections and changes in normal bowel movement because of Diarrhea. Pain when bowels open [17].

Diagnosis of Ectopic Pregnancy

It is very difficult to identify the nature of an ectopic pregnancy based on symptoms alone, as these symptoms may similar to other conditions. The diagnosis is typically confirmed with blood tests and imaging studies, like an ultrasound.

There are different methods to diagnose the EPs like Urinary test, Ultrasound scanning, Blood test for Serum Beta-hg levels, and Keyhole surgery [18,19].

Urinary test

This is first most basic test to diagnose the Ectopic pregnancy, because this test reliant on β-hCG, the hormone which is produced by the fertilized egg, because the hormone is not persist in normal women.

Ultrasound scanning

If woman has positive urine pregnancy test and she has experiencing ectopic symptoms, it is then investigated with transveginal or abdominal scan is required to conform the ectopic pregnancy [20].

Blood test for Serum Beta-hcg levels

The hormone β-Human Chorionic Gonadotropin is produced during pregnancy by trophoblastic cells, which are only found in the body as a result of fertilization. hCG sustains the pregnancy.

Keyhole surgery

If the physician unable to identify actual place of ectopic pregnancy, or the location of the pregnancy is unseen by ultrasound scanning, a laparoscopy may be carried out, this is a type of surgery carried out under general anesthetic. Doctor uses the laparoscope to examine the uterus and fallopian tubes directly.

Methods to treat ectopic pregnancy

Medical management: Methotrexate is used to stop the pregnancy growing by medical management.

Surgical management: laparotomy or laparoscopic is used to remove the pregnancy by surgical method,

Medical management

This is also called as expectant management and the following is likely takes place:

Regular blood examination is required for the level of β-hCG in your blood is going down; these will be needed until the hormone is no longer found in blood stream. This condition may need one of the treatments below if your hormone level doesn't go down or it increases [21-25]. The main advantage of monitoring by medicine is that you won't experience any side effects of treatment. A disadvantage is that there's still a small risk of your fallopian tubes rupturing and you may eventually need treatment [26-30].

Medication: Medicine only can be used for early stage ectopic pregnancies that are in unruptured condition. Depending on where the ectopic grow and what type of treatment would be used, medicine may be less likely than surgical treatment to cause fallopian tube damage [31-33].

Medical management is used to treat ectopic pregnancy if pregnancy hormone (β-hCG, or human chorionic gonadotropin) level is low (< 5,000). If the embryo has no heart activity, Methotrexate is used to stop the growth of an early ectopic pregnancy [33-35].

Surgical management

Surgical therapy may be provided either by open laparotomy or laparoscopic route. Laparoscopy is mostly common approach in most cases [35-38]. Laparotomy is usually used for patients in hemodynamically unstable condition. Laparoscopy is associated with less blood loss and a reduced need for analgesia. Finally, laparoscopy cost effective process, reduces hospitalization, and convalescence period [39-40].
Conclusion

Ectopic pregnancy cannot be analyzed in the group, all sexually active ladies with a background with lower stomach pain and vaginal spotting should be referred to a hospital early for ultrasonography and, if important, estimation of serum concentration of hcg. Ladies with a past history of ectopic pregnancy to have early ultrasonography to check a viable intrauterine pregnancy in their resulting pregnancies. Analytic laparoscopy is important if the clinical circumstance can’t be illuminated or if the patient’s condition weakens.

REFERENCES