Ectopic Pregnancy: Causes, Symptoms and Treatment

Ectopic pregnancy is the implantation of a fertilized ovum in an area other than the endometrium lining or implantation of a fertilized ovum outside the uterus (uterine endometrium), most of which are in the fallopian tube.

It is usually due to partial tube blockage and therefore the patient is often subfertile.

Types of ectopic pregnancy

Ectopic pregnancy can be classified as

- Tubal pregnancy -99%
- Ovarian pregnancy- 0.5%
- Abdominal pregnancy- 0.9%
- Cervical pregnancy- 0.01%
- Tubal pregnancy

Forms about of all ectopic pregnancy with the following distribution.

- Ampulla 55% (6mm diameter)
- Isthmus 25% (2.5mm diameter)
- Fimbriae 1 %
- Intestinal 3% (1mm diameter)

The distribution occurs because the ampulla is the largest in diameter most tortious & widest

In the tubal pregnancy, there is no adequate decidua unlike the uterus, there is a thin layer of connectives tissue separating the epithelium from other muscles so that the trophoblast barrows through & erodes muscular epithelium of the tube.

The outside of the tube is bordered by the peritoneum, as the trophoblast barrows through the muscles, it may meet blood vessels, erode them & result in haemorrhage called aviostella phenomenon. (decidua or blood vessel bleed due to erosion)

Blood may come out through into the peritoneum cavity or flow down the tube into the uterine cavity but mostly into the peritoneal cavity.

The uterus is however slightly enlarged & endometrium undergoes some decidual change just like a normal pregnancy.

The course of tubal pregnancy

Symptoms may occur without a history of amenorrhoea or before, the time of missed period, however in some cases, they occur after a history of (poor decidual formation) amenorrhoea &

after the patient has suspected she is pregnant.

There may be irregular bleeding (vaginal bleeding) from uterine decidua which is less than that of normal periods, this is due to hormonal imbalance influence on endometrium or also occur when fertilized ovum dies.

Abdominal pain precedes the bleeding however there could be no bleeding from the uterus in some cases, their cases, pregnancy could be undisturbed 7 the foetus is alive.

Pain occur due to growing of the ectopic pregnancy as a result of stretching effect on the wall of the fallopian tube

Such pain is usually intermittent & aggravated by activity like lifting a bucket of water.

Continuous accompanied by heavy bleeding which usually ends up in the peritoneum

Signs and symptoms of tubal pregnancy

There are no specific symptoms of ectopic pregnancy but a triad of vaginal bleeding (spotting) abdominal pain, amenorrhoea highly suggest ectopic pregnancy & hence in the presence of the triad to rule out an ectopic pregnancy.

Hence any woman in reproductive period presenting with abdominal pain with or without a history of amenorrhoea an ectopic pregnancy must be ruled out.

The outcome of ectopic pregnancy

1. Tubal mole- Death of a fertilized ovum
2. Tubal abortion- There is an erosion of the wall of the fallopian tube which leads to bleeding with no rupture of the tube but the embryo or fertilized ovum dies.
3. Tubal rupture (gynaecological emergency)

Is the commonest presentation & commonest outcome of tubal pregnancy.

Is as a result of overstretching by the tubal wall by the growing embryo. This overstretches accompanied by physical activity accelerate the rupture.

Any woman presenting with the acute abdomen (i.e sever lap, rebound tenderness, guarding) shock (anaemia, low bp, increased thready pulse, cold extremities) amenorrhoea, +/- spotting is pathognomic or diagnostic of a ruptured ectopic.

1. Abdominal pregnancy (secondary abdominal pregnancy)

A tubal pregnancy can progress to abdominal pregnancy. In this case, the fertilized ovum having eroded the fallopian muscles using the trophoblast drops into the peritoneum through an opening.

Similarly, this can happen at the fimbriae (ostium) & implant into the wall of the peritoneum or ligament hence referred to abdominal pregnancy.

Abdominal pregnancy can be primary or secondary:

Primary abdominal pregnancy

Occurs when the peritoneum via the fimbriae/ostium implanting into the fallopian tube.

Secondary abdominal pregnancy

Occurs when already fertilized ovum having implanted in the fallopian tubes gets detach from its walls & get re-implanted into the peritoneal wall or ligament.

Causes and predisposing factors of ectopic pregnancy

1.Previous tubal inflammation

Diseases like std which lead to pelvic inflammatory disease-causing healing by fibrous tissue & scarring thereby narrowing the tube. There is also the destruction of the cilia & formation of adhesion. This is the most common cause of ectopic pregnancy.

However, it also occurs due to tuberculosis of the pelvis, salpingitis as a result of the heterogeneous spread

2.Previous tubal surgery

Include tuboligation, tuboplasty (surgery done in case of infertility to correct the tubal blockage or to undo tubal ligation.

3.Developmental abnormalities of the tube

Include diverticula, congenital atresia, excessively large tubes hence fertilized ovum can easily lodge in the tube (normal is 10 cm long). Very long tube affect the motility of fertilized ovum hence implants in the fallopian tube.

Ciliary dyskinesia- cilia movement in the opposite direction.

4.Peritubal adhesion from the neighbouring structure

Maybe a due post-abortive complication due to septic abortion

Puerperal sepsis, appendicitis may heal with adhesion.

These may occur causing kinking of the tubes & subsequent narrowing.

5.Previous ectopic pregnancy

May be due to the previous salpingitis as with previous intraperitoneal bleeding which distorts the tubes.

Therefore, a woman who had an ectopic pregnancy stands a chance of getting another ectopic

pregnancy than a woman who had no ectopia

6.Tumours affecting fallopian tube

Tumours arising from the wall of the fallopian tube or other like myomas (fibroids)

They cause pressure to the tube narrowing it or distorting it from the previous position

Tumours arising from fallopian tube wall are rare but can cause blockage to the tube or narrowing of the same.

7.Multiple previous induced abortions

They increase the risk of salpingitis hence high chances of ectopia

8.Progesterone only contraceptive especially minipills

They relax the wall of the tube & reduce peristaltic movement of the ovum hence interfere with implantation of the fertilized egg in the uterus & favours implantation in the fallopian tube.

9.The late release of the ovum

Is due to a pathological condition associated with the ovary.

10.Use of IUD

Cause altered tubal motility & interferes with implantation of the fertilized egg in the uterus.

11.Major surgery

Surgeries like laparotomy for any reason will result in healing by fibrosis & formation of adhesion which can distort or narrow the tube.

Ectopic pregnancy can be classified into two types:

1. Acute ectopic pregnancy and
2. Chronic (slow leak) ectopic pregnancy.

Differential diagnoses for this condition include pelvic inflammatory disease (PID), appendicitis, abortion, and ruptured ovarian cyst.

Signs and symptoms of ectopic pregnancy

For acute ruptured ectopic pregnancy:

Sudden sharp abdominal pain (lower)is the commonest symptom & occurs in about 95% of all the cases. Its usually unilateral & radiates to the shoulder due to diaphragmatic irritation or peritoneal irritation by the blood during ruptures.

Before rupture or because of a slow leaking ectopic pregnancy, abdominal pain is vague & intermittent, however, pain is always there

Therefore any woman within a reproductive age group that presents with lower abdominal pain, and ectopic pregnancy must be ruled out and it goes further to say that any woman in reproductive age group presenting with acute abdomen most probably is an ectopic pregnancy.

History of amenorrhoea may be present or not but present in most cases (5%) commonly between 6-8 wks

Nausea and vomiting occur especially if it has ruptured

Vaginal bleeding or spotting. When the endocrine support stops, uterine decidual formation. Blood is usually scanty, dark brown, intermittent or continuous but not profuse

Other symptoms and signs of early pregnancy may be present.

Incase of unruptured/ undisturbed ectopic pregnancy, features of shock are present .may occur also in a slow leaking ectopic pg otherwise in ruptured ectopia, the patient is pale ++, has a rapid thready pulse, low temp cold extremities, rapid & shallow respiratory rate & low bp, cold clammy skin, features of shock. abdominal tenderness on per abdomen may or may not be present in case of unruptured or slight tenderness may be on listed but in ruptured there is marked abdominal tenderness rebound tenderness occurs.

Guarding is present of abdominal muscle uterus grows slightly 7 may be palpable bimanually

On vaginal examination

Cervical motion is positives (cervical excitation test)

Positive adnexal tenderness

Pelvic mass (adnexal mass) may be palpable which is about 5cm in diameter. Is