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- Previous STD, especially Chlamydia
- Previous EP whether treated medically or surgically.
- Previous tubal surgery, reconstructive or reanastomosis.
- History of ART, IUI, insemination, ovulation induction.

If you have enough clinical suspicious, then you should start building up your diagnosis. Clinical examination is not usually helpful, and you have to be careful with pelvic exams, as it may trigger severe pain and induce tubal rupture and significant pelvic bleeding. In fact, if you are sure you are dealing with EP; pelvic internal exam should be avoided and prohibited.

That leaves us with only two critical examinations; quantitative serum B-HCG (Se. B-HCG) level and endovaginal ultrasound examination with or without Doppler exam.

With quantitative serum B-HCG level, it has been serial measurements and the result should be available within 24 hours if not less and shouldn't be more. In a healthy pregnancy, even if there is no diagnosis on ultrasound or the ultrasound has diagnosed what is known as "pregnancy of unknown location"; the serial measurement of Se. B-HCG should confirm steady and continuous rising, which doubles up in value every 48 to 72 hours. Therefore, we ask to repeat the measurement of quantitative serum B-HCG level every two to three days, till ultrasound can give us clear answer of where the pregnancy is located. If the quantitative serum B-HCG levels are static, not rising or doubling every 2-3 days or dropping, the diagnosis of EP is highly suspected. It is not pathognomonic however, as this can also happen with early pregnancy failure, blighted ovum or early foetal demise. The second critical test, i.e. ultrasound can differentiate between all these.

Ultrasound examination is a corner stone in our diagnosis of EP. With the advances of ultrasound high resolution and HD, liberal use of endovaginal scanning and Doppler examination, major improvement happened in the diagnosis of EP in the last 15 to 20 years. Careful examination of any adnexal mass should be carried out, especially if it increases in size on subsequent ultrasound examination, with evidence of vascularity on Doppler assessment. Sometimes gestational sac can be detected in adnexa with or without fetal pole and fetal heart. If this is seen, you have a real emergency on your hands.

Now, you have patient with abdominal quadrant pain, steady or declining quantitative serum B-HCG level, mass in adnexa with increased Doppler blood flow around it. The diagnosis is adnexal EP. A plan of management should be laid out and discussed with the patient, partner or family if available, based upon a number of key determinations, namely: the other symptoms of pain severity, how is the BP, pulse rate, desire for future fertility, cardiovascular stability of patient. We should take into account other factors including known pelvic conditions like adhesions, endometriosis, previous tubal surgery, history of previous EP or tubal ligation. Diagnostic laparoscopy may be considered to confirm the diagnosis, plus or minus other laparoscopic intervention, like Methotrexate injection into the EP, adhesiolysis, removal of the ectopic tissue and conservation of the tube or removal of the tube with the ectopic pregnancy as one block. Laparoscopy for diagnosis alone is not common, especially with the availability of accurate quantitative serum B-HCG assay and sensitive ultrasound. The use of diagnostic laparoscopy is on the decline. It remains however a cornerstone in the surgical treatment.

Once the diagnosis of EP has been confirmed and you are comfortable with it, the next stage is to establish the method in which it will be managed, depending upon the aforementioned factors. It will lie between:

- **Medical intervention**; that will include the use of Methotrexate (MTX) with education to patient, arranging follow up and managing her pain till the condition is resolved.
- **Surgical intervention**; that is usually laparoscopic intervention aiming at: i.) removal of the ectopic tissue from the tube, ii.) stopping the tubal bleeding, iii.) ensuring the opposite tube is healthy and normal looking, and iv.) inspecting the rest of the pelvis to exclude other diseases. In rare occasions, especially when the patient is hemodynamically unstable, emergency STAT laparotomy can be employed, accompanied simultaneously with adequate and competent resuscitation especially blood replacement to compensate for significant blood loss that can occur inside the peritoneal cavity.

What are the choices of surgical treatment of EP? If no further fertility or children is required, then salpingectomy will be in order. It is easy to do laparoscopic and usually no need for post op follow up with quantitative serum B-HCG measurement.

However, in the majority of cases, further fertility is required. In this case, there are three surgeries can be applied:

Laparoscopic injection of MTX into the EP under direct vision. If a needle is inserted into the tubal swelling, blood can be aspirated first, or