دهمین سمینار سلامت مادر، جنین و نوزاد

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ECTOPIC PREGNANCY

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- GS is outside the uterus
- The most common life threatening emergency in early pregnancy
- Important cause of maternal morbidity and mortality
- Prevalence 1.3-2 % - 4% in ART
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- Symptoms & signs: Nausea – Breast fullness – Fatigue – Lower abdominal pain – Heavy cramping – Shoulder pain – Uterine bleeding Spotting – Pelvic tenderness – enlarged uterus Adnexal mass – HCG <6000 at 6wk – less than 66% increase in HCG titer in 48 hr – Absence of GS in uterus by TVS – GS outside the uterus by TVS
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- Types: 90% in fallopian tube – cervix – ovaries – c/s scar – abdomen

- Treatment:  *Laparotomy
  - *Laparascopy
  - *Chemotherapy
  *Expectant management
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- Interstitial pregnancy (cornual):

  * Prevalence: one in 5000
  * High morbidity & mortality
  * Increased risk of rupture and hemorrhagic shock
  * Mortality rate 2 – 2.5%
  * 2 – 4% of EP
  * Late onset symptom
  * More growth
  * Occasional term pregnancy
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- Cornual EP:
  * treatment is salpingotomy with or without cornual resection
  * Hysterectomy
  * Local MTX injection in early phase
  * Resection or injection by hysteroscopy
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- Expectant management:
  
  *some tubal pregnancies aborts or reabsorbs
  * > 2000 IU HCG  93% failure
  * < 2000 IU HCG  60% succeed
  * preserves tubal function and fertility
  * increased retained product of conception
  * only when TVS fail to show location of GS and low HCG titer
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- Medical treatment:
  * cornual pregnancy
  * incomplete resolution of surgically treated EP
  * residual trophoblastic tissue
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- Criteria for MTX administration: stable hemodynamic patient willingness - HCG < 5000 – absence of FHR

- Two regimens: MTX and leucovorin on alternative days

  single dose MTX by weekly repeat if HCG don’t fall by 15% between days 4 and 7
Laparoscopy versus laparotomy

Laparoscopic surgery is the standard surgical approach for ectopic pregnancy. Most ectopic pregnancies, even in the presence of hemoperitoneum, may be treated using a laparoscopic procedure. However, for patients with acute bleeding, some surgeons prefer laparotomy.
Laparoscopic salpingostomy resulted in significantly shorter operation time, less perioperative blood shorter duration of hospital stay, shorter convalescence time, and, therefore, lower costs
Laparoscopic salpingostomy resulted in a higher rate of persistent trophoblast than salpingostomy via laparotomy.

There were no significant differences in the rate of subsequent intrauterine pregnancy or repeat ectopic pregnancy. The higher rate of persistent ectopic pregnancy following laparoscopic salpingostomy may reflect the experience of the laparoscopic surgeon.
Salpingostomy consists of making an incision in the fallopian tube and removing the ectopic gestation. The steps of the procedure are the following:

- The ectopic pregnancy is identified and the tube is immobilized with laparoscopic forceps.
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A 22-gauge needle is inserted through a 5 mm portal and used to inject a solution of vasopressin into the wall of the tube at the area of maximal distention this helps to minimize bleeding at the salpingostomy site. In our practice, we use a solution of 0.2 international units/mL of physiologic saline and inject volume of up to 5 mL.
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Using electrosurgery or scissors, a 10 mm longitudinal incision is made along the tube overlying the ectopic gestation. The incision is made along the border of the tube that is not on the side to which the mesosalpinx attaches.
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The products of conception are released from the tube using a combination of hydrodissection with irrigating solution under high pressure and gentle blunt dissection with a suction irrigator. The specimen can then be placed into a laparoscopic pouch and removed from the abdominal cavity; it is also useful for removal of large fragments of placental tissue.
Using fluid to remove the gestation is preferable to removing it bluntly. Extracting the products of conception in pieces with forceps may lead to retained trophoblastic tissue, particularly in the area of the tube proximal to the ectopic gestation.

The tube is carefully irrigated and inspected for hemostasis. Bleeding points can be controlled by applying pressure or
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- coagulated with light application of bipolar coagulation. In order to avoid excessive coagulation to the tube, we use a microbipolar forceps. If bleeding persists, vessels in the mesosalpinx can be ligated with 6-0 polyglactin suture. The placental bed inside the tube should not be coagulated because this will seriously damage the tube.
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- The incision is left open to heal by secondary intention; the subsequent rates of fertility and adhesion formation are similar after secondary intention or primary closure.
Salpingectomy
Salpingectomy is the removal of a portion or all of the fallopian tube. Total or partial salpingectomy may be performed for the tube with the ectopic gestation. The decision for partial versus total salpingectomy depends upon the patient's age, whether she has one or two tubes, the condition of the tube, and plans for future fertility.

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If the tubal damage is confined to a midportion tubal segment containing the ectopic gestation, either a partial or total salpingectomy may be performed.

If the length of the remaining portions of tube is minimal or the fimbria must be removed to remove the ectopic gestation, total salpingectomy is performed.
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In general, we perform partial salpingectomy to allow the option for tubal reanastomosis at a future date.

However, in women who will undergo IVF, we prefer total salpingectomy to decrease the possibility of tubal stump pregnancy and the development of hydrosalpinx of the proximal portion of the tube.
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There are several methods for laparoscopic salpingectomy. One approach is to bring the fallopian tube through a pre-tied surgical loop using a grasping forceps. The knot is tightened; the tube is then resected and removed. A second loop can be placed on the excised stump.
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Alternatively, electrosurgery or preferably a device with minimal thermal effects can be used to seal the vessels in the mesosalpinx, followed by resection of the specimen with scissors. The cornual portion of the tube is excised close to the uterus. It is important to elevate the tube and cut the mesosalpinx close to the tube to avoid inadvertently damaging the ovarian vessels.
Risk factors for persistent trophoblast after salpingostomy include surgeon's inexperience, removal of the gestational tissue in fragments, and trophoblasts infiltrating deeply into the tubal wall.
Monitoring hCG postoperatively

For women who undergo salpingostomy, serum human chorionic gonadotropin (hCG) is measured weekly until the level is undetectable.

One study (n = 147) of women who underwent salpingostomy found that the serum hCG concentration on the first postoperative day generally declined by more than 50 percent of the preoperative
value. There were no cases of persistent ectopic pregnancy when the postoperative hCG on day 1 fell by more than 76 percent.

For cases in which the surgeon is not certain whether the entire products of conception have been removed, a single prophylactic dose of methotrexate given immediately postoperatively has been proposed.
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Treatment
If the hCG level does not decline with each measurement or does not reach an undetectable level within a reasonable time period, we treat with methotrexate. The regimen of methotrexate is the same as for primary medical treatment of ectopic pregnancy.