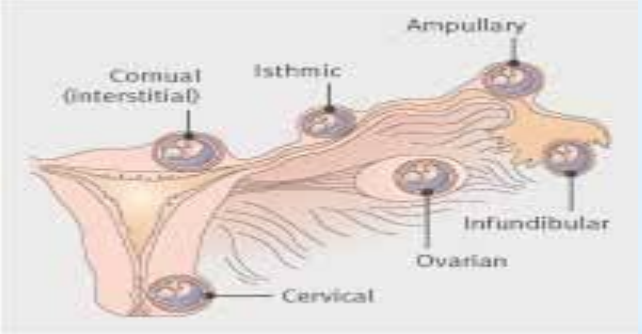
In the name of Allah

Ectopic Pregnancy



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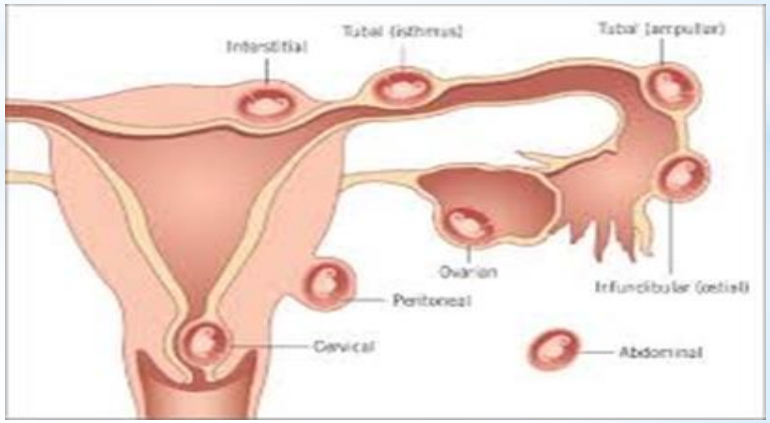
Ectopic pregnancy:

Extrauterine pregnancy

- ✓ *Fallopian tube: 96 %*
- ✓ *Cervix*
- ✓ *Interstitial portion of the fallopian tube (corneal)*
- ✓ *Hysterotomy/cesarean scar*
- ✓ *Myometrium*
- ✓ *Ovary*
- ✓ *Heterotopic*



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- *Pharmacologic therapy is the preferred treatment*

- *Indications for surgical therapy (last resort):*

✓ *Hemodynamic instability*

✓ *Suspicion for rupture*

✓ *Contraindications to MTX*

✓ *Failed medical therapy*

- ***Emergency surgery:***

✓ ***Hemodynamically unstable***

✓ ***Signs or symptoms of impending or ongoing rupture of ectopic mass:***

- ***Pelvic or abdominal pain***

OR

- ***Evidence of intraperitoneal bleeding suggestive of rupture***

- ***Indications for a concurrent surgical procedure:***

✓ ***Desire for sterilization***

✓ ***Planned in vitro fertilization for future pregnancy with known hydrosalpinx***

- ✓ *In hemodynamically **stable** patients, surgical intervention should be performed **only** if a TVS clearly shows a tubal EP or an adnexal mass suggestive of EP*

- ✓ *If no mass is visualized sonographically, there is a high likelihood that a tubal pregnancy will not be visualized or palpated at surgery, and the surgery may be unnecessary or unsuccessful*

- ***These patients should be managed conservatively with either medical therapy or expectant management***

- ***If there is diagnostic uncertainty about whether a pregnancy is intrauterine or ectopic and it is certain that the pregnancy is not viable, a dilation and curettage may be performed***

Laparoscopy versus laparotomy:

*Laparoscopic is the **standard** surgical approach for EP*

- ✓ *In **hemoperitoneum**, some surgeons prefer laparotomy. The choice of surgical approach should be made by the surgeon with consultation from the **anesthesiologist** and by taking into consideration the **clinical status** of the patient*
- ✓ *Some surgeons prefer laparotomy for **interstitial pregnancy***

- ***Benefits of laparoscopy***

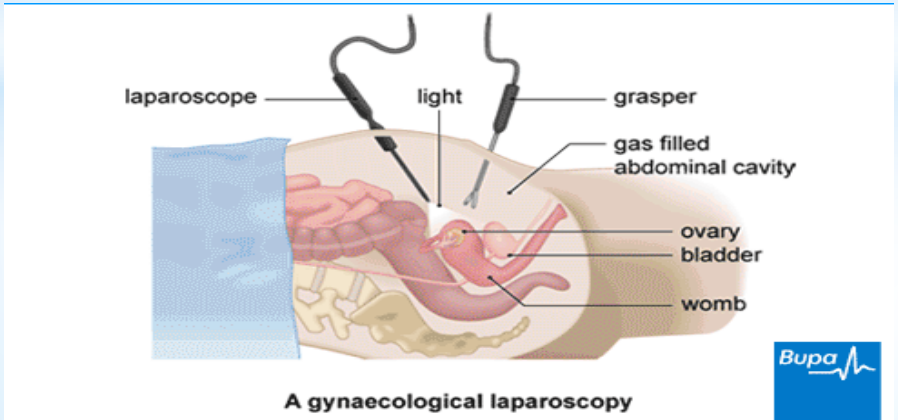
✓ *Shorter operation time*

✓ *Less perioperative blood loss*

✓ *Shorter duration of hospital stay*

✓ *Shorter convalescence time*

✓ *Lower costs*



A gynaecological laparoscopy

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SURGICAL PLANNING

- ✓ *Salpingectomy: removal of the fallopian tube*

- ✓ *Salpingostomy: incising the tube to remove the tubal gestation but leaving the remainder of the tube intact*

***Similar** fertility outcomes in subsequent pregnancies & risk of recurrent EP*

- *Salpingectomy is the standard procedure if:*

✓ *Ruptured tube or moderately or severely damage tube*

✓ *Uncontrolled tubal bleeding*

✓ *Large tubal pregnancy (3 cm)*

➢ *Advantage of salpingectomy is that it avoids persistent trophoblast*

➢ *Based on the risk of retained gestational tissue following salpingostomy, salpingectomy is required in patients who have contraindications to MTX*

Salpingectomy:

Removal of fallopian tube

- *Total or partial salpingectomy:*

✓ *patient's age*

✓ *patient has one or two tubes*

✓ *condition of the tube*

✓ *patient's plans for future fertility*

- *If the length of the remaining portions of tube is minimal or the fimbria must be removed, total salpingectomy is performed*

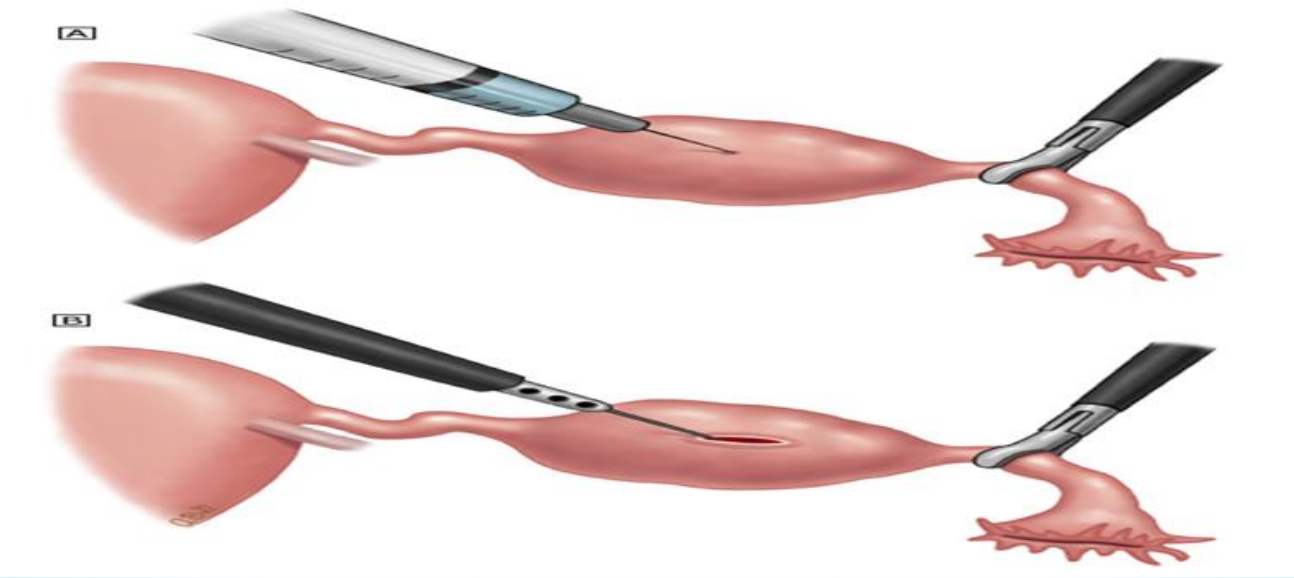
Salpingostomy:

Making an incision in the fallopian tube and removing the ectopic gestation

- ✓ *EP is identified and the tube is immobilized with laparoscopic forceps*

- ✓ *22-gauge needle is inserted through a 5 mm portal & used to inject a solution of vasopressin into the wall of the tube at the area of maximal distention*

- ***Using electrosurgery or scissors, a 10 mm longitudinal incision is made along the tube overlying the ectopic gestation & is not on the side to mesosalpinx attaches***



- ✓ *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*
- ✓ *Specimen can then be placed into a laparoscopic pouch and removed from the abdominal cavity*
- ✓ *Tube is carefully irrigated and inspected for hemostasis*
- ✓ *Bleeding points can be controlled by applying pressure or coagulated with bipolar coagulation*
- ✓ *Incision is left open to heal by secondary intention*

- *Laparoscopic vs. laparotomy salpingostomy:*

✓ *Higher rate of persistent trophoblast*

✓ *No significant differences in the rate of subsequent intrauterine pregnancy or repeat EP*

- ***FOLLOW-UP:***

Persistent ectopic pregnancy (4 to 15 %)

Risk factors:

- ✓ ***surgeon's inexperience***
- ✓ ***removal of the gestational tissue in fragments***
- ✓ ***trophoblasts infiltrating deeply into the tubal wall***

- *Monitoring hCG postoperatively*

✓ *hCG is measured **weekly** until the level is undetectable*

✓ *There were no cases of persistent ectopic pregnancy when the postoperative hCG on day 1 fell by **more than 76%***

- *When surgeon is not certain whether the entire products of conception have been removed, a **single prophylactic dose of MTX** given immediately postoperatively has been proposed*

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