Early pregnancy bleeding

Ectopic pregnancy

Dr. Kakali Saha
MBBS, FCPS, MS (Obs & Gynae)
Associate Professor
Medical College for Women & Hospital

Ectopic pregnancy

- ***Definition :*** An ectopic pregnancy is one in which the fertilised ovum becomes implanted in a site other than the normal uterine cavity.

- Extrauterine pregnancy -but rudimentary horn of a bicornuate uterus.

- It is the consequence of an abnormal implantation of the blastocyst.

Incedence

- Worldwide 3-4% of all pregnancy.
- In USA 2%
- Some study 16 in 1000. Past 20 years incidence risen

✦ After one ectopic - there is a7-13 fold increase risk of subsequent ectopic

✦ Subsequent intrauterine preg —50-80%

✦Tubal preg 10-25%

✦Infertile — remaining patient

Sites of ectopic pregnancy

According to frequency

- Fallopian tubes 95-98% (At fimbriated end 17%, Ampulla-55%,Isthmus 25% interstitial 3%)
- Uterine cornu 2-2.5%
- Ovary, Cervix & abdominal cavity <1%

- Right side is more common than left.

Risk factors

- PID (pelvic inflammatory diseases —6 fold increases risk
- Use of IUCD —3-5% increased risks
- Smoking 2.5% increased risks
- ART 3-5% increased risks
- Tubal damage
- Tubal surgery 5.8%
- Salpingitis isthmica nodes 3.5% increased risks
- Prior ectopic pregnancy

cont.

Risk factor

- Age 3 fold increased risks in 35-44 years compared to 18 -24 yrs
- Non white race 1.5 fold increased risks
- Endometriosis 1.5 increased risks
- Developmental errors
- Overdevelopment of ovum & external migration .

Aetiology

- Tubal damage or altered motility results improper transport of blastocyst
- Most common cause is acute salpingitis 50%
- In 40% no risk factors apparent
- Salpingitis causes peritubal adhesion , lumen occlusion , intratubal adhesion diverticula & disturbed tubal function.
- PID due to infections eg Chlamydia, gonococcal, tuberculosis, postabortal, puerperal, pelvic peritonitis also appendicitis
- Altered tubo- ovarian relationship in endometriosis.

Sites of ectopic pregnancy

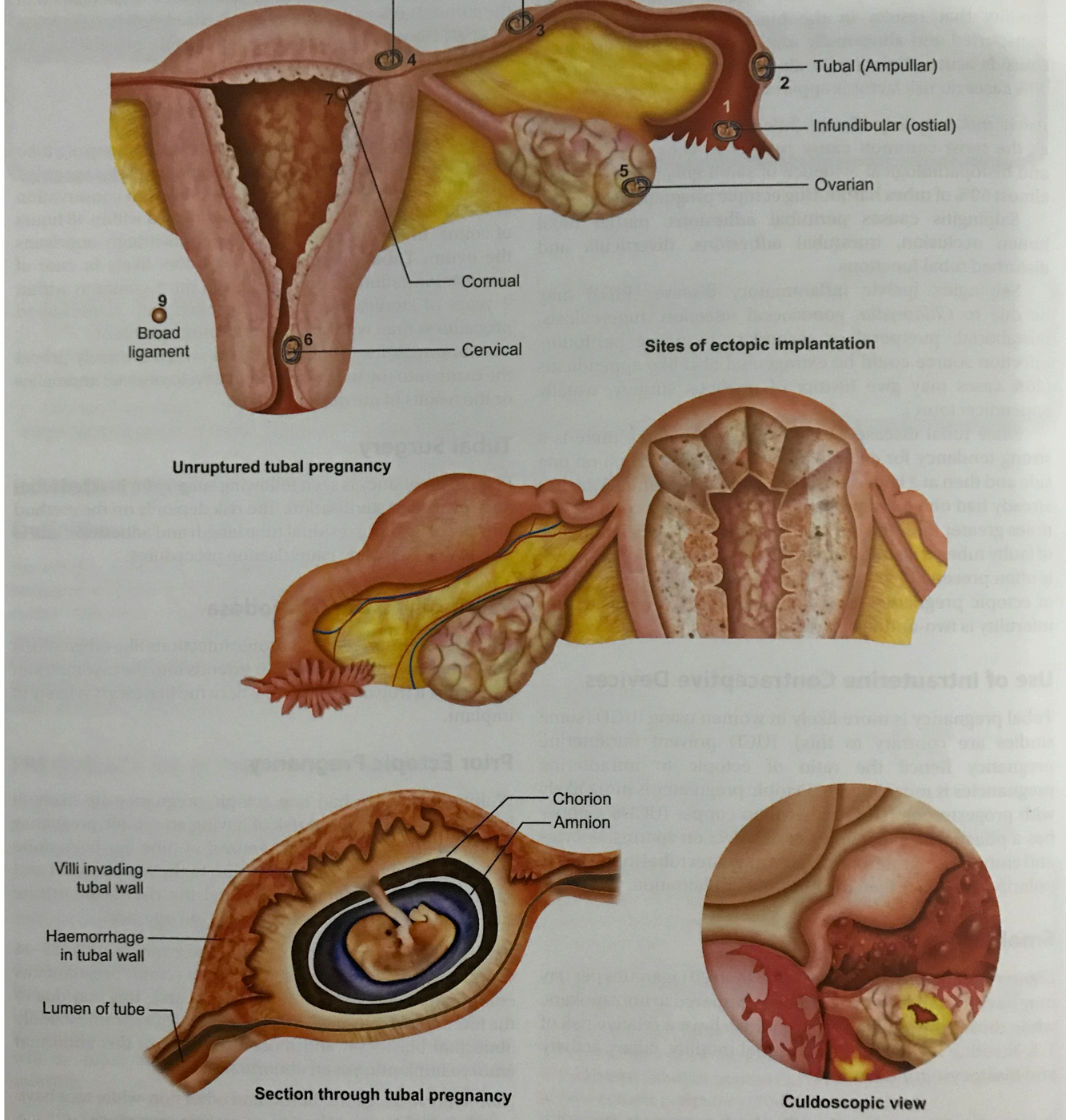


Fig. 9.1: The sites of ectopic pregnancy. (1) Fimbrial, (2) Ampullary, (3) Isthmic, (4) Interstitial, (5) Ovarian, (6) Cervical, (7) Cornual-rudimentary horn, (8) Secondary abdominal, (9) Broad ligament, (10) Primary abdominal

Outcome / Fate

- Tubal abortion
  - Complete absorption
  - Complete abortion
  - Incomplete abortion
- Missed abortion
- Tubal rupture
- Chronic ectopic adnexal mass
- Foetal survival to term

Clinical features

Symptom & signs

- Normal symptom & signs of pregnancy (amenorrhoea and uterine softening)
- Acute abdominal pain(dull, cramps or colicky)
- Evidence of haemodynamically instability (hypotension, collapse, S/S of shock)
- Adnexal mass (with or without tenderness)
- Vaginal bleeding
- Signs of peritoneal irritation
- Absence of G. Sac in uterine cavity on USG with a beta HCG > 2500 mlU/ml
- Abdominal pregnancy

Classical triad

A pt. with ***amenorrhoea, pain, vaginal bleeding*** should always be suspected to have an ectopic pregnancy.

The dictum to early diagnosis & successful management is to “Think Ectopic” but also not to “Over Think Ectopic”.

Differential diagnosis

The picture of Ectopic is extremely variable & mimic with intraabdominal disease.

- Obstetric diseases
  - Abortion of an early intrauterine pregnancy
  - Abortion followed by salpingitis
  - Early pregnancy with pelvic tumours
  - Retroverted gravid uterus (Threatened abortion)
  - Septic abortion
- Gynaecological diseases
  - Degenerating fibroid
  - Dysfunctional uterine bleeding
  - Endometriosis
  - Ovulation (Mittleschmerz)
  - Ruptured corpus luteum
  - Torsion of adnexal mass
  - Acute or subacute salpingitis (including tuberculosis)
  - Dysmenorrhoea
- Nongynaecological conditions
  - Appendicitis
  - Gastroenteritis
  - Mesentric thrombosis
  - Perforated peptic ulcear
  - Renal colic
  - Intraperitoneal haemorrhage from any source (Rupture splenetic aneurysm/tumours).

Diagnosis

Classical triad of ***pelvic pain, vaginal spotting and amenorrhoea***5-9weeks

Others

Adnexal mass or tenderness, S/S pregnancy, dizziness, passage of clot or tissue.

In case of rupture - shoulder pain due to diaphragmatic irritation

S/Sign of shock

Tests and aid to diagnosis

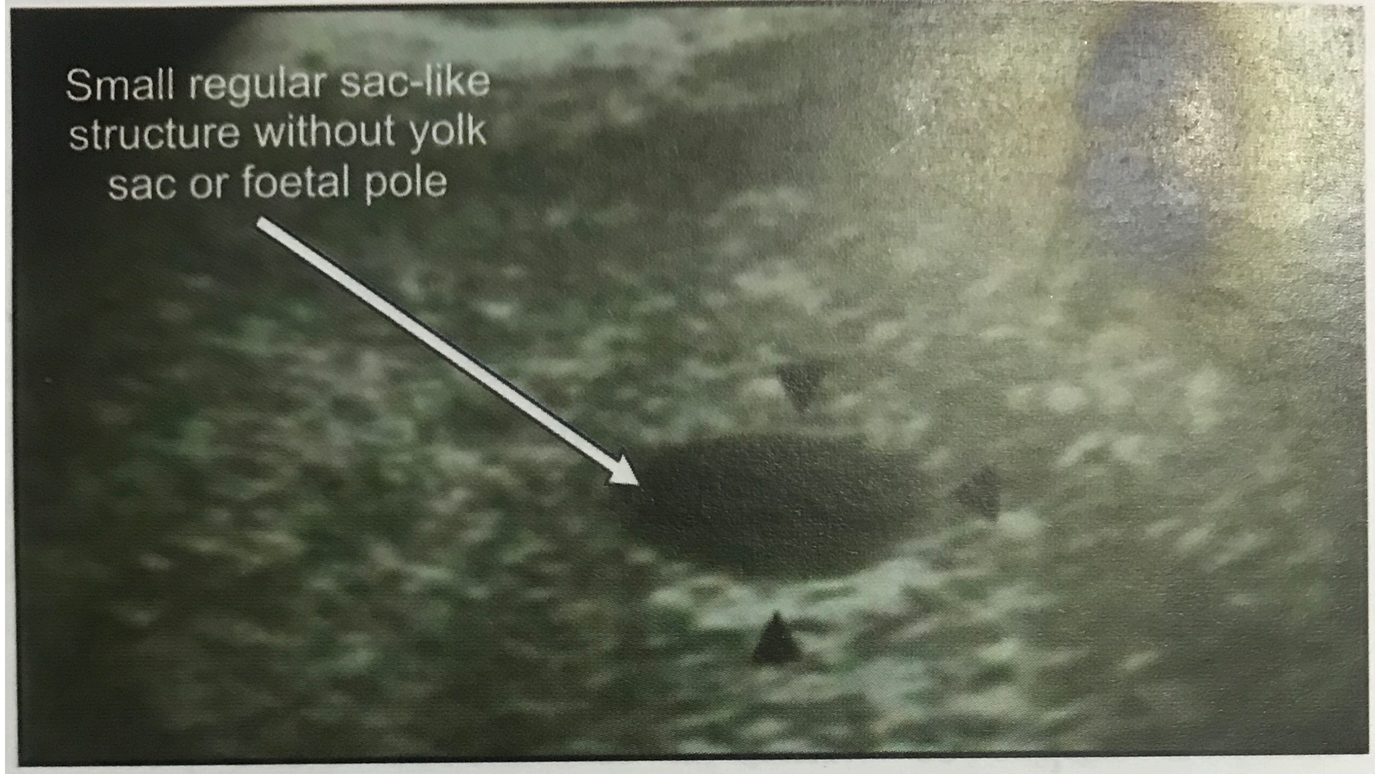
- Urine for PT -50% case positive
- Serum beta HCG- is less as compared to normal pregnancy. (TVS detect sac when beta HCG >2400mIU/ml.

✤ Serial beta HCG in 48 hours not double

- Serum Progesterone >25 ng/dl is associated with an intrauterine preg in 97.5%
- Ultrasound .

Ultrasound
Uterine findings

- Empty uterus
- Thickened endometrium
- Pseudogestational sac



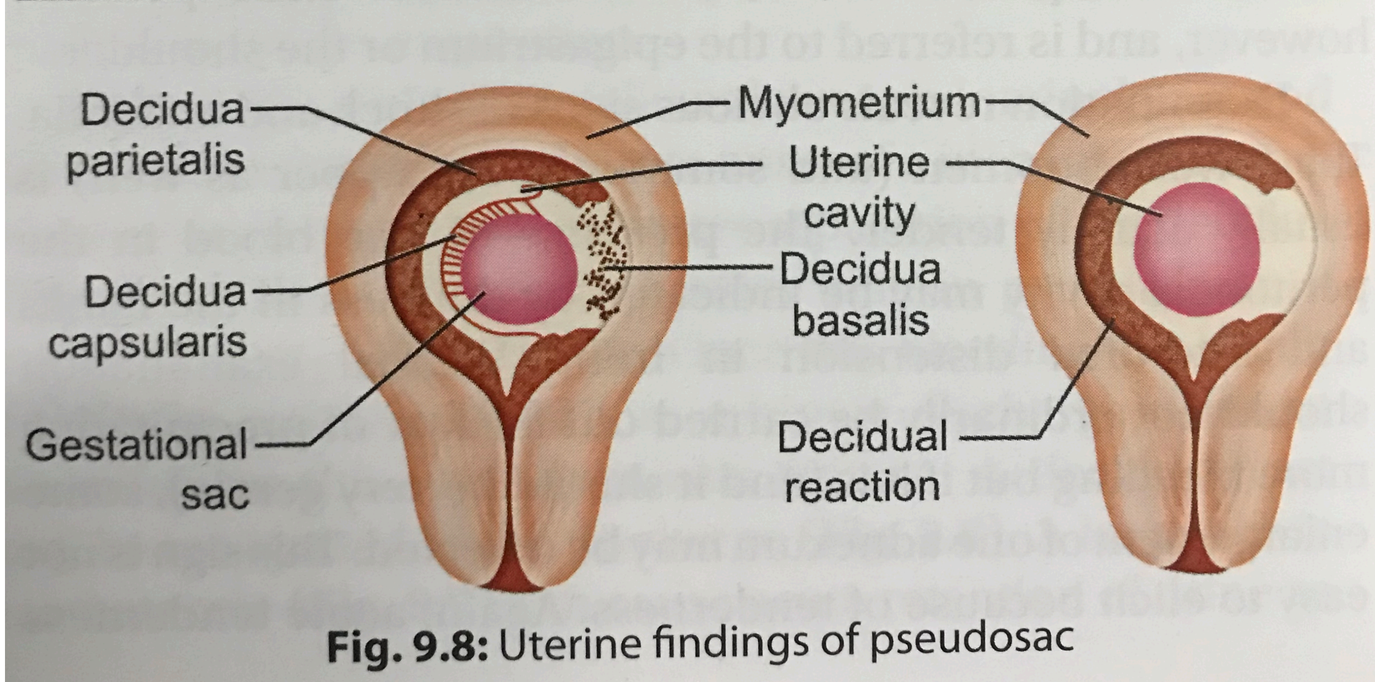


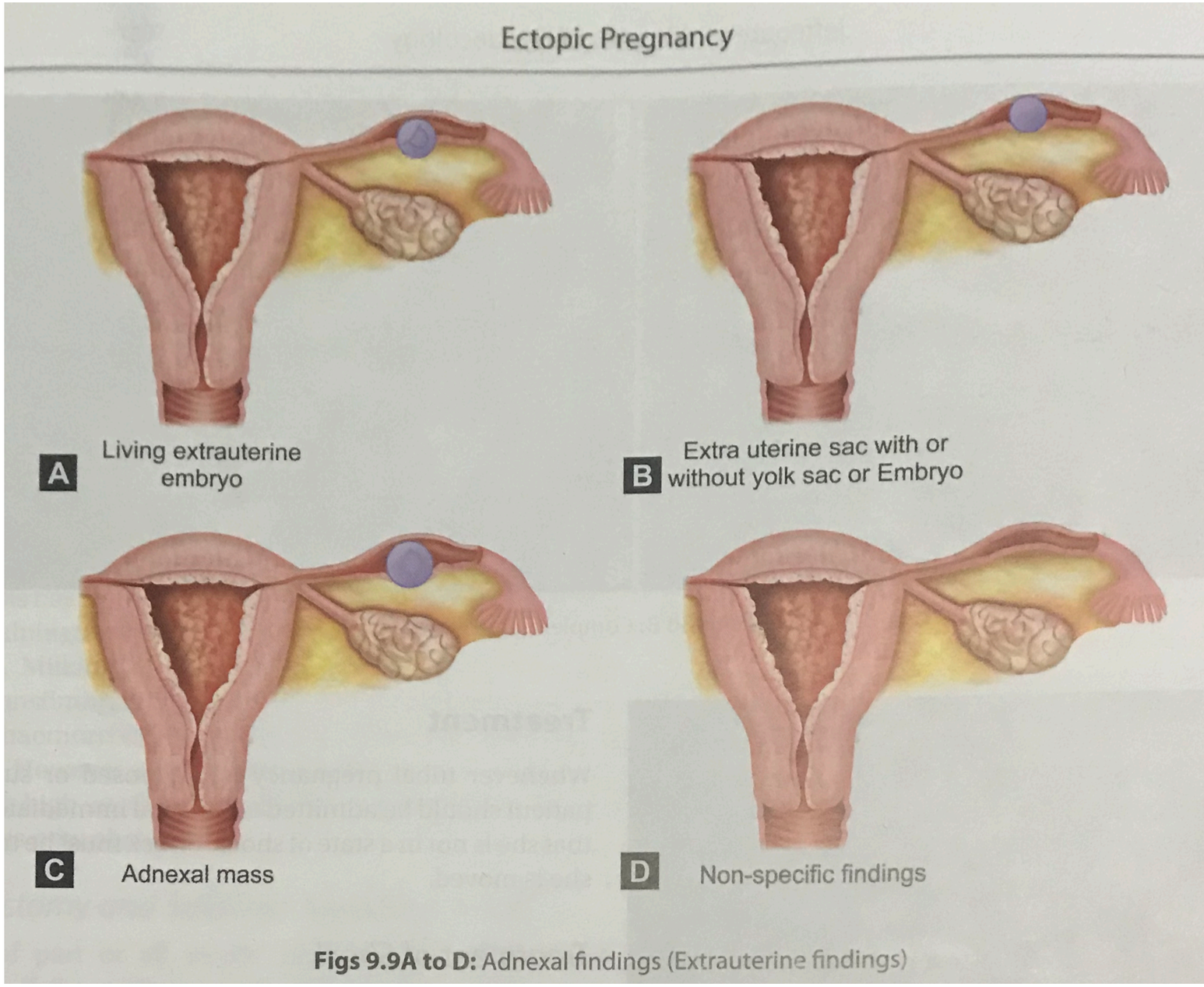
Fig. 9.8: Uterine findings of pseudosac

Ultrasound

Extrauterine

- No findings
- Live tubal pregnancy
- Adnexal ring sign
- Complex adnexal mass
- Free fluid in pouch of Douglas.

✤ *Colour dopplar will classically identify "**ring of fire**" around the ectopic on the same side of corpus luteum.*



Figs 9.9A to D: Adnexal findings (Extrauterine findings)

Other placental marker

- Serum creatine kinase (CK)
- Pregnancy specific beta(1)- glycoprotein(sp1)
- Human placental lactogen(HPL)
- Pregnancy associated plasma proteins A (PAPP-A)
- Vascular endothelial growth factors, progesterone and PAPP -triple marker test
- Cancer antigen 125 (CA125)
- Serum IL-8,IL6,and TNF-α increases in ectopic.

Others

- Pelvic examination under GA
- Culdocentesis
- Posterior colpotomy
- Laparoscopy
- Curettage
- Others lab test -CBC, blood grouping and typing etc

Manangement & Treatment Options

- Hospitalisation
- Shock must be treated before she is moved.
- Options depends on

✦ Condition of patient like acute chronic ,ruptured , enraptured , ectopic other than fallopian tube eg uterine scar, ovarian, cervical, abdominal.

Options

- Expectant management
- Medical
- Surgical

Expectant management

In case of early diagnosis

- When beta HCG < 1000mIU/ml
- Gestational sac diameter < 2 cm on TVS
- Free fluid haemoperitoneumat POD < 50 ml

★ Nearly 2/3rd patient will undergo spontaneous resolution within 3-5 weeks

❖ Regular monitoring with hCG and USG required.

Medical management

- ***Absolute***

✳ Haemodynamicaly stable patient

✳ No evidence of acute intra-abdominal bleeding

✳ Compliance of regular follow up

✳ No contraindications for MTX (methotrexate)

Cont.

- ***Preferable***
- When beta HCG < 10,000mIU/ml
- Absent or mild symptom
- Absent of embryo heart activity
- Gestational sac diameter < 4 cm on TVS
- No Free fluid POD #

Surgical management

- After laparotomy or laparoscopy

✤ Salpingotomy

✤ Salpingectomy

✤ Salpingo-ophrectomy is never recommend unless ovary itself is grossly damaged or diseases.

❖ Rh Negative patient when hopeful of further pregnancy **Anti -D** immunoglobulin must be given immediate postoperative period.

Abdominal pregnancy

Primary or secondary

- The foetus develops in the peritoneal cavity, its amniotic sac becoming supported by an outer coat of organising lymph and blood exudate
- Some preg proceed to term when spurious labour ensues
- Uterus contract , some dilatation of cervix
- C/F normal pregnancy sign except it is unusually uncomfortable, pain abd. distention, occasional slight P/V bleeding
- Uterus felt like tumours , separated from preg sac which not contract
- P/V exam cervix displaced, often upwards & forwards with fatal parts lying below & behind it.

Cont

- USG may help or miss
- Treatment - laparotomy
- Placental management - not to removed , umbilical cord is cut short left it to be absorbed during the next 1-2 years
- Only need to removed when abscess formed.
- Follow up must. Beta hCG & progesterone fall during Course of 8-12. Weeks.
- If fetes dies -defer operation to allow the placental sinuses to become thrombosed & follow up coagulation profile.

SCHEME OF MANAGEMENT OF TUBAL ECTOPIC PREGNANCY

- Detailed history, evaluation of high risk factors and examination
- Urine—β hCG (ELISA)/Serum β hCG
- Ultrasound scan (Transvaginal preferred)

BE ECTOPIC MINDED

- Some clinical features
- β hCG—negative

Repeat β hCG in 1 week

Negative

Pregnancy excluded

- Some clinical features
- β hCG—positive

USS (TVS)

[Discriminatory zone of β hCG on TVS = 1500 mIU/mL]

Intrauterine sac

Determine viability
- β hCG increase > 60% in 48 hrs.
- Sr. Progesterone > 25 ng/mL
- Rpt. USG

Empty uterine cavity with adnexal mass

Laparoscopy

Unruptured tubal ectopic pregnancy

- Strong clinical features
- β hCG—positive
- Patient in shock/unstable hemodynamically

Resuscitation and laparotomy

Ruptured tubal ectopic pregnancy

Salpingectomy

Expectant
- Initial β hCG <1000 IU/L
- Falling hCG titre
- Ectopic mass diameter is < 4 cm
- No evidence of bleeding or rupture

Medical

Direct local [Laparoscopy/ USS guided]
- MTX
- Pot. Chloride

Systemic
- MTX
- Actinomycin

Surgery
Laparoscopy/ Laparotomy

Conservative
- Expressing out from distal tube
- Salpin-gostomy
- Salpingo-tomy

Extirpative
- Salpingectomy
- Segmental resection

β hCG follow-up to detect persistent trophoblastic disease (ectopic pregnancy)

USS = Ultrasound scan TVS = Transvaginal sonography MTX = Methotrexate PGS = Prostaglandins

The End

Thank you all