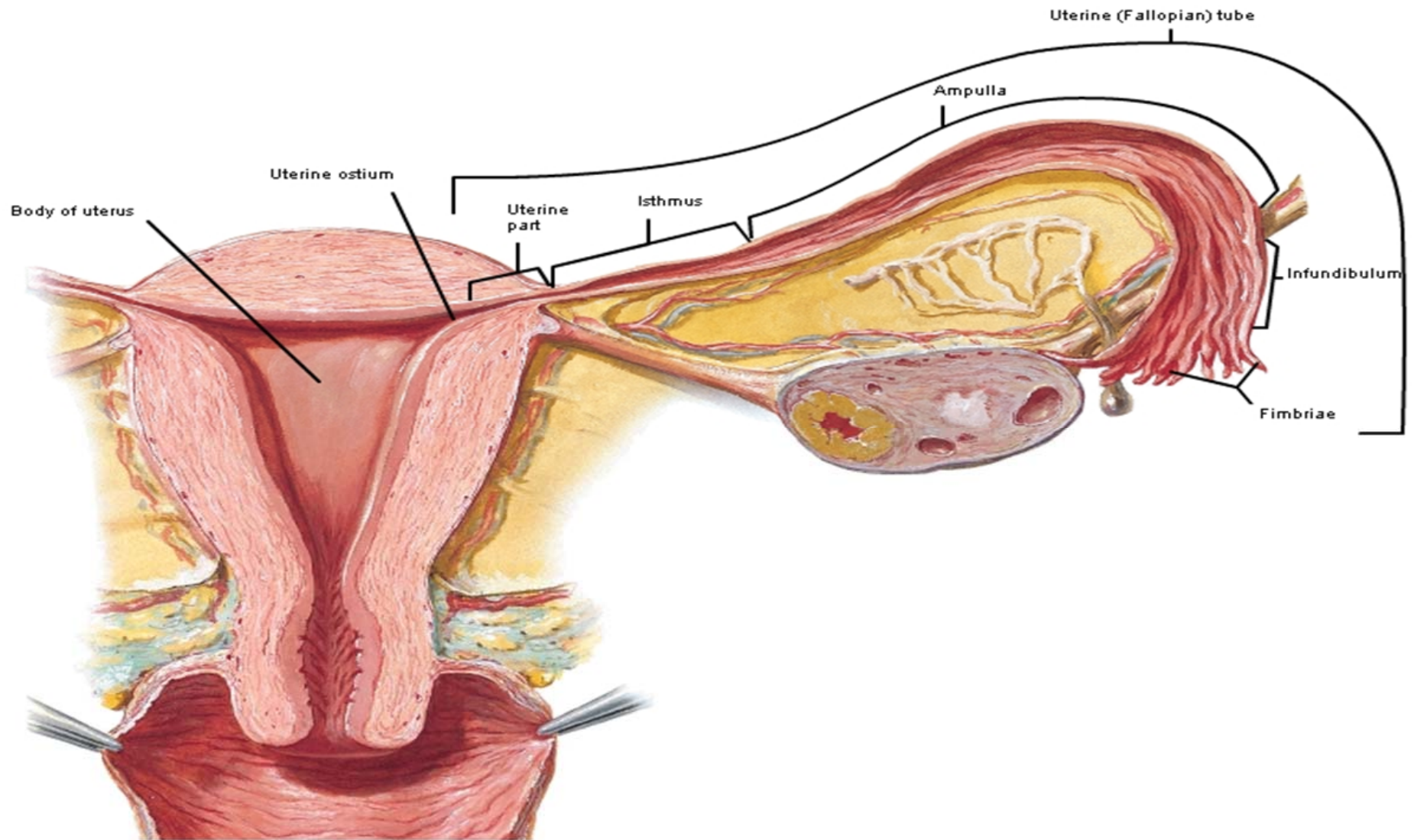


Case Study #3

Bekah Bowman

9.11.08

Uterus and Adnexa Frontal Section



Female Internal Reproductive Anatomy

- Ovary
- Uterine tube
 - Infundibulum: fimbriae and abdominal ostium
 - Ampulla: widest/longest; fertilization
 - Isthmus: thick walls
 - Uterine part: uterine ostium

Anatomy Cont.

- Uterus (3 Layers)
 - Endometrium: mucous layer
 - Location of normal implantation of blastocyte
 - Myometrium: smooth muscle layer
 - Perimetrium: outer serous layer

Normal Implantation

- Ovulation
- Abdominal ostium of uterine tube and ovary become closely apposed during ovulation
- Fimbriae sweep ovum into tube
- Ovum carried down uterine tube
- Fertilization in ampulla of uterine tube
- Zygote → Morula → Blastocyst
- Day 6-7: Blastocyst implants in endometrium of uterus

Pronuclear stage



2-cell



4-cell



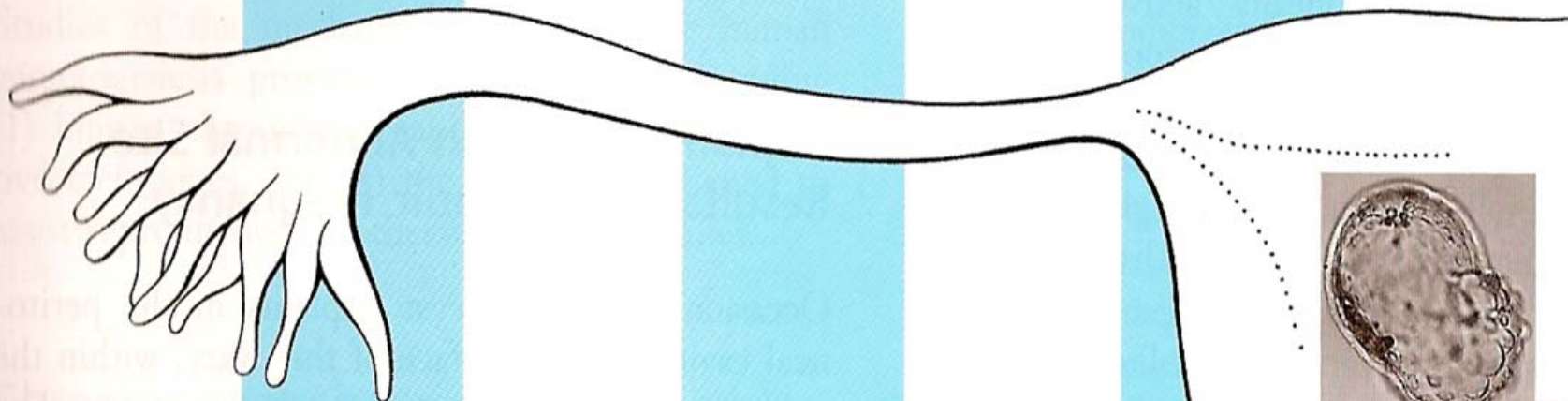
8-cell



Morula



Blastocyst



Day 0

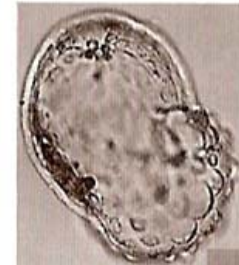
Day 1
24 hours

Day 2
48 hours

Day 3
72 hours

Day 4
96 hours

Day 5
120 hours



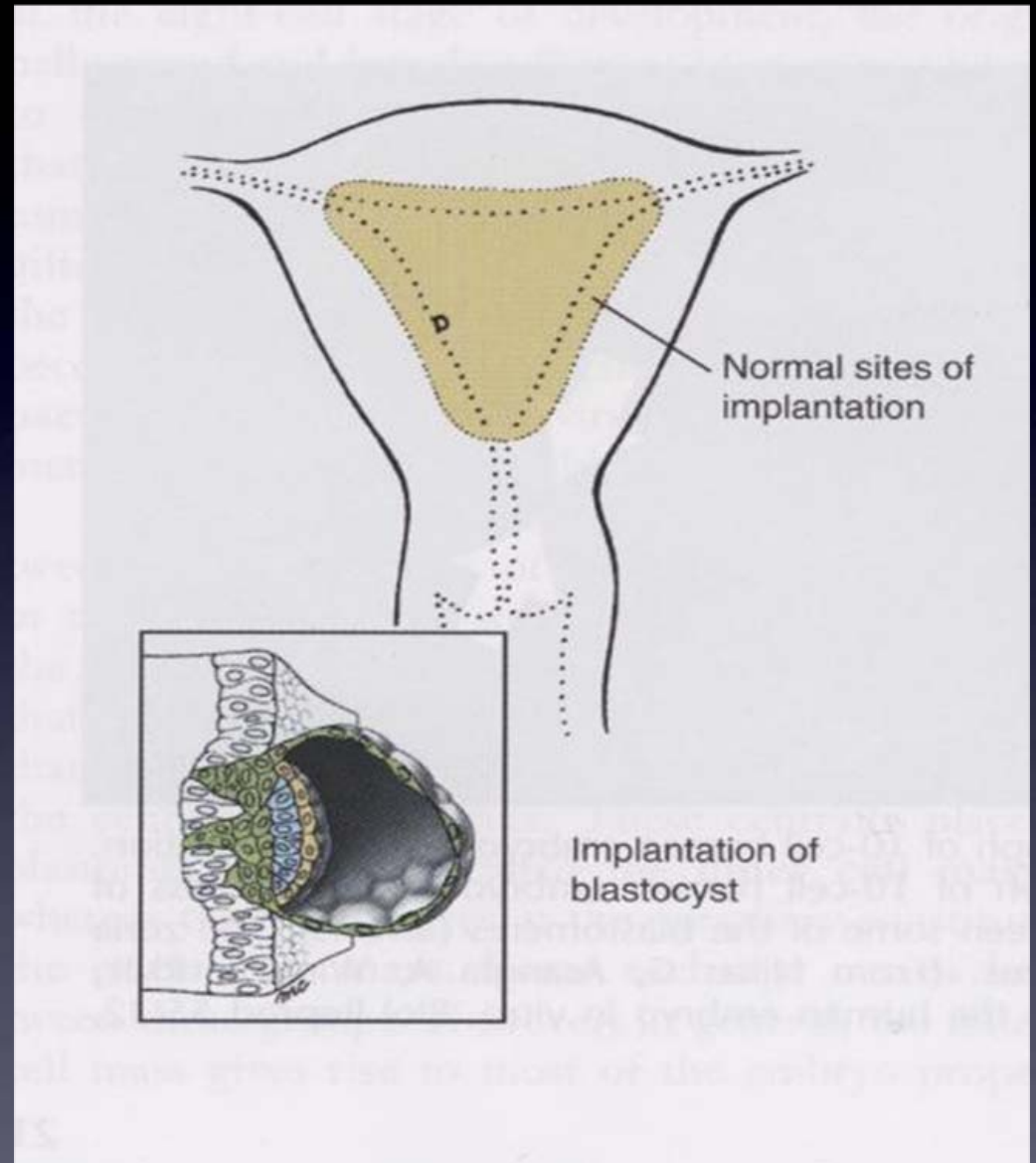
Hatching
blastocyst



mcg

Normal Implantation Cont.

- Endometrium ideal
 - Vascularized
 - Growth factors
 - and metabolites
 - secreted (uterine glands)
 - Room for growth
 - in uterus



What we know....

- 30 year old Negro female
- 6th pregnancy
- 4th pregnancy going full term
- two previous abortions

Admitted to hospital...

- increasingly severe lower abdominal pain
- Syncope (fainting) associated with abdominal pain
- slight vaginal bleeding: 2 days prior
- bleeding accompanied by nausea; no vomiting
- last NORMAL menses: 8 weeks prior

- # Physical Exam

 - moderately distended and diffusely tender abdomen
 - tenderness present in cervix, uterus, and right and left adnexa (uterine tubes)
 - Serous (clear fluid) discharge from vagina
 - A culdocentesis aspirated blood from the rectouterine space. (by puncture of apex of vaginal wall)
 - Pregnancy Test: negative

A

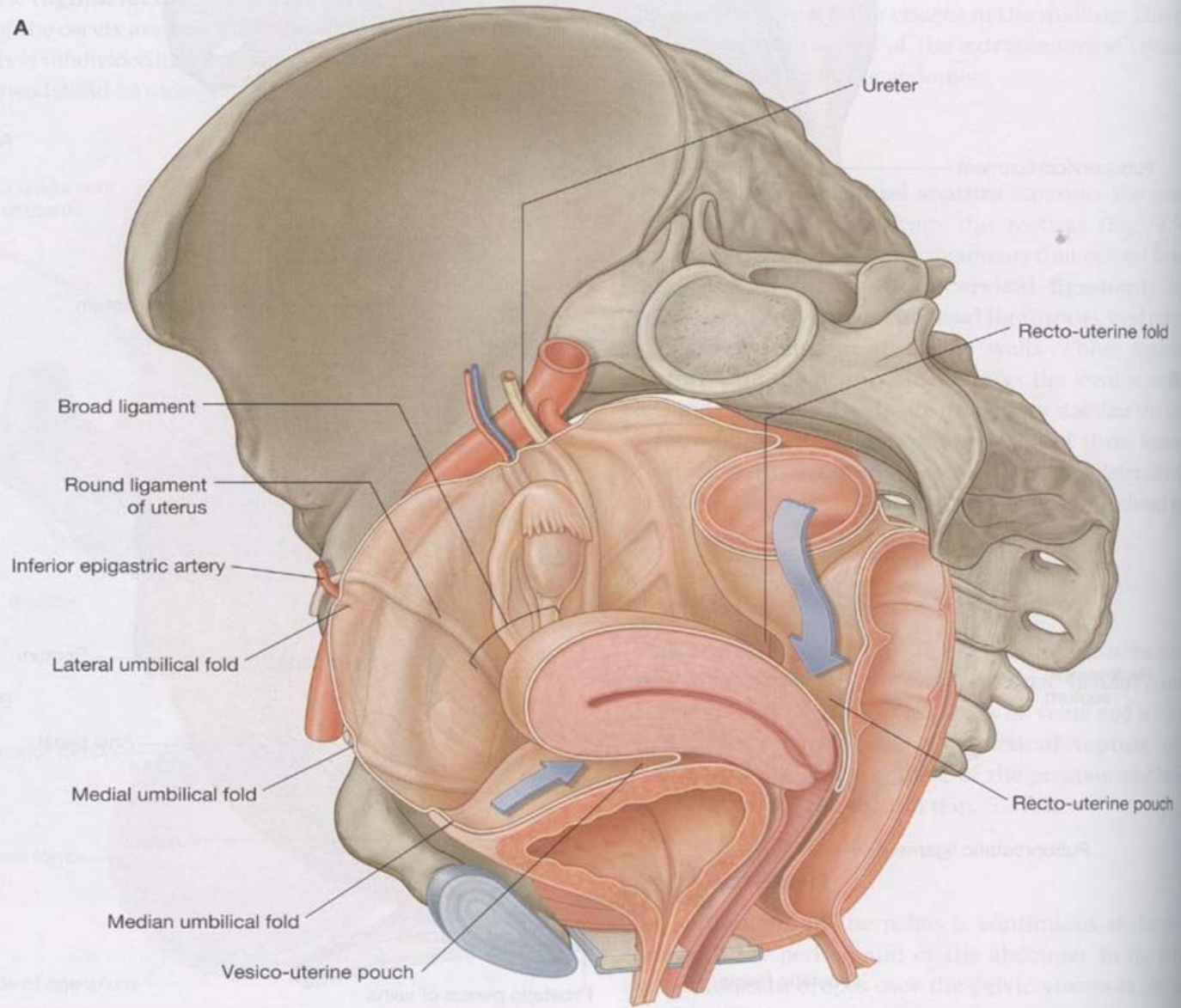
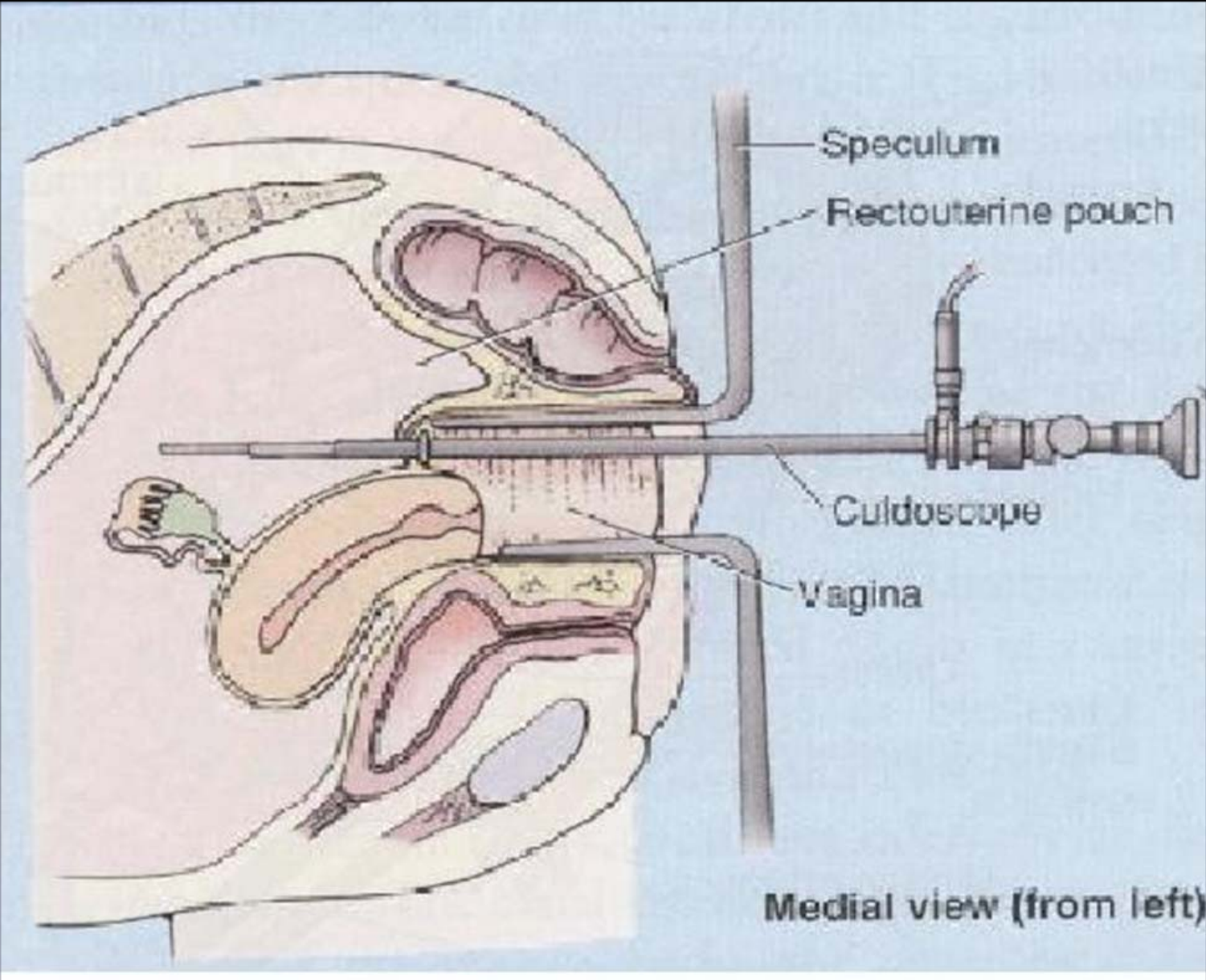


fig. 5.58 Peritoneum in the pelvis. **A.** In women.



Prodecure performed...

- Laparotomy: incision into abdominal cavity through the vagina
- Left ovary had corpus luteum of pregnancy
- Ampulla of right uterine tube contained hemorrhagic mass showing active bleeding.

- POSSIBLE DIAGNOSIS??

Possible Diagnosis?

- Ectopic pregnancy-Right Tubal Pregnancy
- Blastocyst implants at abnormal site outside uterus
 - Sites:
 - Uterine tubes (tubal pregnancy)
 - Ovary (ovarian pregnancy)
 - Abdominal cavity (abdominal pregnancy)
 - Intrauterine portion of uterine tubes (cornual pregnancy)

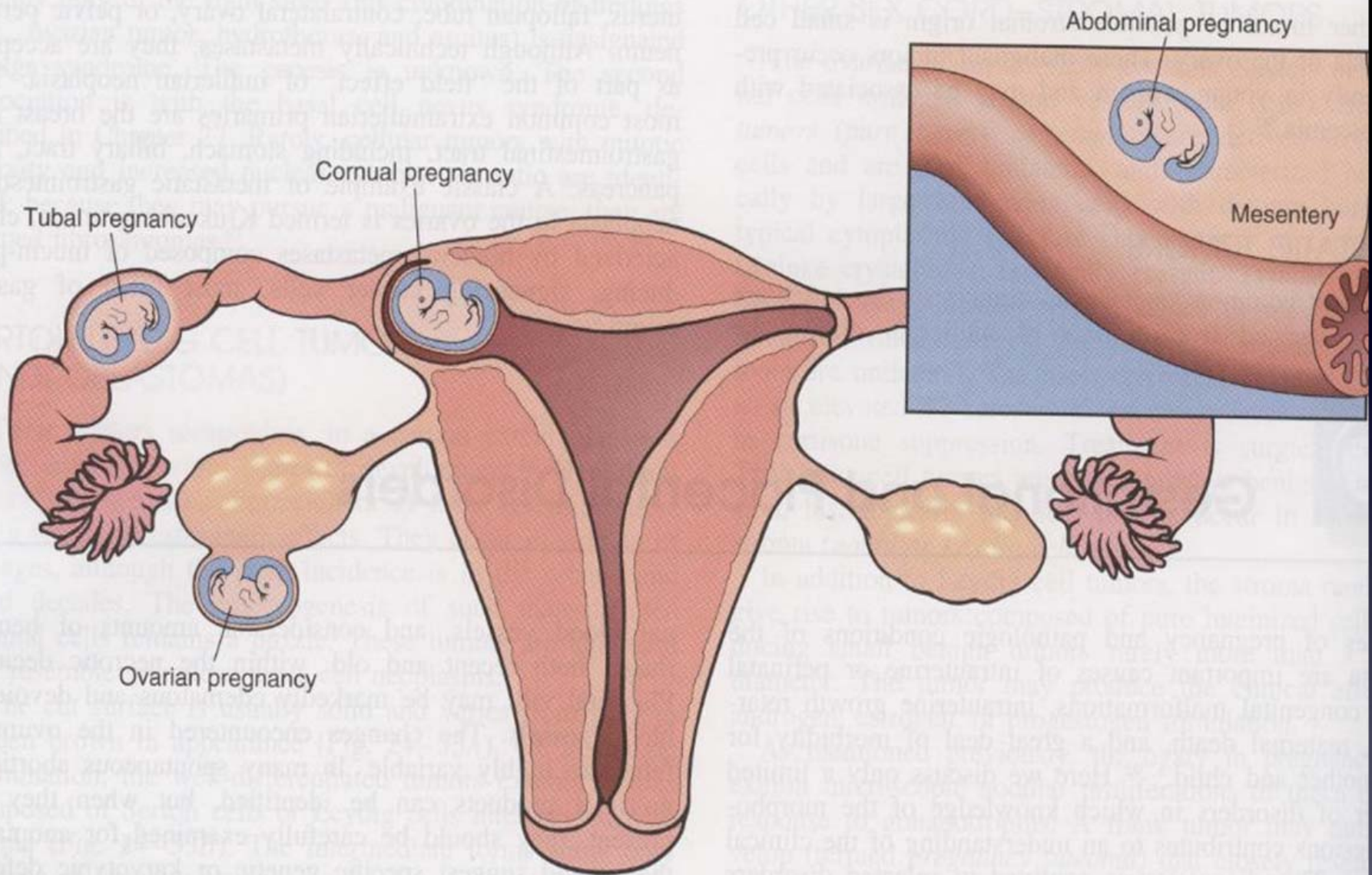


Figure 24-54

- Ectopic Pregnancy

- Sites:

- Uterine tube (~97% of all ectopic pregnancies)
 - Ampulla: ~55%
 - Isthmus: ~25%
 - Fimbria: ~17%
- Ovary (ovarian pregnancy) and Abdominal Cavity (abdominal pregnancy): ~3%



- Where did implantation of the blastocyte occur in this patient?
- Uterine Tube
- What risk factors could have attributed to ectopic pregnancy?

● Risk Factors

- Previous tubal surgery (distal tubal surgery)
- Previous ectopic pregnancy
- Gonorrhea – affects mucous membrane; pus
- Postabortion
- Previous intrauterine device use
- Increasing age
- infection of uterus during labor

TREATMENT

- Right salpingectomy-
surgical removal of uterine
tube.
- Clotted and free blood
evacuated

Pathology Report

- Gross description
 - Distal 8 cm of right uterine tube enlarged
 - Patent fimbriated end
 - Small smooth-lined, clear-filled paratubal cyst
 - Opened cyst contains fetus - 2 cm length

Pathology Report Cont.

- Microscopic description
 - Proximal portion of right uterine tube
 - Patent lumen
 - Small amt. of inflammatory cells within muscularis
 - Distal portion of right uterine tube and placenta
 - Blood clots found between placenta and epithelial lining of the tube.

- Last Menstrual Cycle: 8 Weeks

- Due to Corpus Luteum, which sustains the endometrium.

- Blood in pelvic cavity (rectouterine space)??

- Ruptured blood vessels from Uterine Tube.

- Pregnancy Test: Negative??

- human chorionic gonadotropin (hCG) produced by trophoblast cells when implanted into uterus. Ectopic Pregnancies produce hCG at slower rate.

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