

REPRODUCTIVE SYSTEM 3RD WEEK



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Physiology

[6] Physiology of pregnancy

Q1: The sperm reaches ampulla after.....of ejaculation:

- A- 15-20 min
- B- 2-3 min
- C- 30-60 min
- D- 3-6 min

Answer:C

Q2:Fertilized ovum (zygote) contains:

- A-23unpaired chr
- B-23 paired chr
- C- 46 paired chr
- D-22 paired chr

Answer:B

Q3:The zygote reaches uterine cavity:

- A-after 3-5 days of fertilization
- B-after one week of fertilization
- C- after one month of fertilization
- D-after 30-60 minutes of fertilization

Answer:A

Q4:In implantation the blood starts to be pumped by fetal heart into the Capillaries at day.....Atfter fertilization:

- A-9
- B-21
- C- 20
- D-23

Answer:B

Q5:Which of the following hormones promotes release of fatty acids:

- A-ACTH
- B-Human placental lactogen

- C- Estrogen
- D- Progesterone

Answer: B

[7] Physiology of labor

Q1: Towards the end of pregnancy:

- A- Uterine contractions become progressively stronger
- B- Uterine contractions become progressively slower
- C- Contraction of the vagina

Answer: A

Q2: During the last trimester of pregnancy, which of the following is correct:

- A- Progesterone secretion increases
- B- Estrogen secretion increases
- C- Estrogen secretion decreases
- D- Progesterone secretion decreases

Answer: B

Q3: Which one of the following labor phases has the highest level of oxytocin:

- A- Phase 0
- B- Phase 1
- C- Phase 2
- D- Phase 3

Answer: D

Q4: Which one of the following labor phases is associated with the delivery of placenta:

- A- Phase 0
- B- Phase 1
- C- Phase 2
- D- Phase 3

Answer: D

Q5: The full dilatation of the cervix is:

- A- 5 cm
- B- 10 cm
- C- 8 cm
- D- 6 cm

Answer: B



Pharmacology

[2] Oxytocics & Tocolytics

which one of the following will produce vasoconstrictions of peripheral blood vessels (toes and fingers)?

- A. - oxytocin
- B. - ergot alkaloids
- C. - tocolytics

Ans: B

Which one of the following will cause ankle edema as a side effect ?

- A. Ritodrine
- B-Atosiban
- C-Dinoprostone
- D.nifedipine

Ans: D

Which of the following is superior to oxytocin as for women with preeclampsia as it doesn't cause fluid retention ?

- A. - Dinoprostone
- B. - Ergotamine
- C. - Ergonovine

Ans: A

Which of the following we should avoid in case of asthmatic pregnant women as it cause bronchoconstriction?

- A. - Dinoprostone
- B. - Ergotamine
- C. - Carboprost

Ans: C

Which one of the following will cause tetanic contractions ?

- A. - Dinoprostone
- B. oxytocin
- C. - Ergotamine

Ans: C

Which one of the following will cause pulmonary edema as a side effect ?

- a. Ritodrine
- B. - Atosiban
- C. - Dinoprostone

Ans: A

[3] Teratogens and drugs of abuse

Which one of the following drugs if used by the mother during pregnancy will cause Phocomelia to the foetus ?

- A- Sulfonamide
- B- Thalidomide
- C- carbimazol

Ans: B

Which one of the following drugs if used by the mother during pregnancy will cause Spina bifida to the foetus ?

- A. Valproic acid
- B. - carbimazol
- C. - streptomycin

Ans: A

Which one of the following drugs if used by the mother during pregnancy will cause ototoxicity to the foetus ?

- A. Valproic acid
- B. - carbimazol
- C. – streptomycin

Ans: C

Which one of the following drugs if used by the mother in near term during pregnancy will cause ototoxicity to the foetus ?

- A. Sulfonamide
- B. - Thalidomide
- C. - carbimazol

Ans: A

which one of the following is probably safe for hypertensive mother ?

- A. - captopril
- B. - enalapril
- C. alpha methyl dopa
- D. - propranolol

Ans: C

Which one the following antithyroid is preferable over others during pregnancy ?

- A. - propylthiouracil
- B. - carbimazol
- C. - radioactive iodine

Ans: A

[4] Contraceptive drugs

The main action of Combined oral contraceptive is ?

- A. -suppressing the release of gonadotrophins
- B. -decrease endometrial proliferation
- C. -increase viscosity of cervical secretion

Ans: A

2-breakthrough bleeding & spotting during early use of?

- A. -MINI Pills
- B. -MORNING-AFTER Pills
- C. -Seasonal Pills

Ans: C

3-female 40 years of old and obese which contraceptive is appropriate for her?

- A. MINI Pills
- B. -MORNING-AFTER Pills
- C. -Seasonal Pills

Ans: A

[5] Hormonal replacement Therapy:

Estrogen if given with which one of the following could cause additive side effects ?

- A. SERMs
- B. Aromatase inhibitors
- C. Corticosteroids

Ans: A

2-estrogen is contraindicated in which of following cases?

- a. urethral & urinary symptoms
- b. Undiagnosed vaginal bleeding
- c. Primary ovarian failure

Ans: B

3-Which of the following decrease the risks of developing endometrial & breast cancer?

- A. Estrogen
- B. Phytoestrogens
- C. Androgen

Ans: B



Pathology

[5] PATH - Ectopic Pregnancy_ Spontaneous Abortion and Trophoblastic Diseases

A 40-year-old woman presents with a 5-year history of dysmenorrhea. Physical examination and endocrine studies are normal. A hysterectomy is performed. Histologic examination of the uterine wall reveals areas of extensive adenomyosis. Which of the following best describes this patient's uterine pathology?

- (A) Benign neoplasm of glandular epithelial cells
- (B) Displacement of endometrial glands and stroma
- (C) Endometrial intraepithelial neoplasia
- (D) Hyperplasia of trophoblast as a sequel of incomplete abortion
- (E) Premalignant uterine lesion composed of smooth muscle

The answer is B: Displacement of endometrial glands and stroma.

Adenomyosis refers to the presence of endometrial glands and stroma within the myometrium. One fifth of all uteri removed at surgery show some adenomyosis. Microscopic examination of these lesions reveals glands lined by mildly proliferative to inactive endometrium and surrounded by endometrial stroma with varying degrees of fibrosis. Many patients with adenomyosis are asymptomatic; however, it is not uncommon for patients to exhibit varying degrees of pelvic pain, dysfunctional uterine bleeding, dysmenorrhea, and dyspareunia. Adenomyosis does not represent a neoplastic process (choices A, C, and E).

Diagnosis: Adenomyosis

A 20-year-old woman presents to her gynecologist with a

3-day history of vaginal bleeding. An ultrasound shows a dilated endometrial cavity. Evacuation of the uterus by suction curettage reveals grapelike clusters and fetal parts. Cytogenetic examination of this tissue will most likely demonstrate which of the following genetic patterns?

- (A) Aneuploidy
- (B) Diploidy
- (C) Euploidy
- (D) Haploidy
- (E) Triploidy

The answer is E: Triploidy.

Cytogenetic examination of a partial hydatidiform mole will reveal triploidy. In contrast to a complete mole, which exhibits diploidy (choice B), fetal parts are commonly present in a partial hydatidiform mole.

Diagnosis: Partial hydatidiform mole

A 22-year-old woman presents to the emergency room with a 2-hour history of acute abdominal pain and vaginal bleeding. Her vital signs are normal. Physical examination reveals blood oozing from the vaginal opening. Laparotomy shows an enlarged right fallopian tube with hemorrhage and rupture. What is the most likely cause of hemorrhage in this patient?

- (A) Choriocarcinoma
- (B) Ectopic pregnancy
- (C) Infarcted tubal polyp
- (D) Intramural leiomyoma
- (E) Tubal adenocarcinoma

The answer is B: Ectopic pregnancy.

Over 95% of ectopic pregnancies occur in the fallopian tube. Ectopic pregnancy results when the passage of the conceptus along the fallopian tube is impeded. The trophoblast readily penetrates the mucosa and tubal wall. The thin tubal wall usually ruptures by the 12th week of gestation. Tubal rupture is life threatening because it can result in rapid exsanguination. The other choices are rare.

Diagnosis: Ectopic pregnancy

A 41-year-old immigrant woman from Asia presents for prenatal care. Her uterus is significantly larger than expected, and her serum hCG level is much higher than expected for her due date. No fetus is found on ultrasound examination. The abnormal placenta is removed. One month later, this patient presents to the emergency room with abdominal pain. Exploratory laparotomy reveals rupture of the posterior uterine fundus with grape-like tissue extruding from the defect. Two liters of blood are present in the abdominal cavity. Histologic examination of the uterine mass is shown in the image.

The arrows point to syncytial cells. Which of the following is the most likely diagnosis?

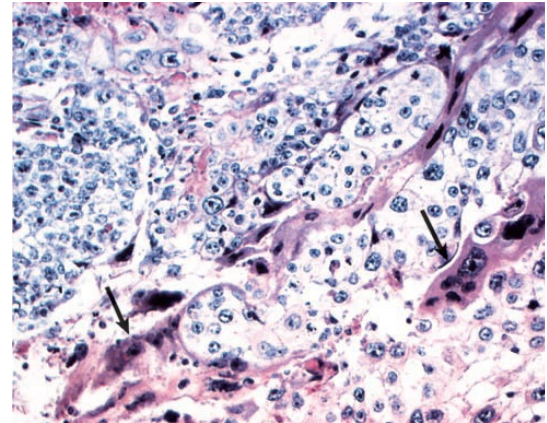
- (A) Carcinosarcoma
- (B) Choriocarcinoma
- (C) Embryonal carcinoma
- (D) Endometrial adenocarcinoma
- (E) Yolk sac carcinoma

The answer is B: Choriocarcinoma.

Choriocarcinoma occurs in 1 in 30,000 pregnancies in the United States. In Asia, the frequency is far greater. Choriocarcinoma develops in about 2% of patients after a complete hydatidiform mole has been evacuated.

Abnormal uterine bleeding is the most frequent initial indication that heralds choriocarcinoma. Occasionally, the first sign relates to metastases to the lungs or brain. In some cases, choriocarcinoma only becomes evident 10 or more years after the last pregnancy. The other choices are not sequelae of gestational trophoblastic disease.

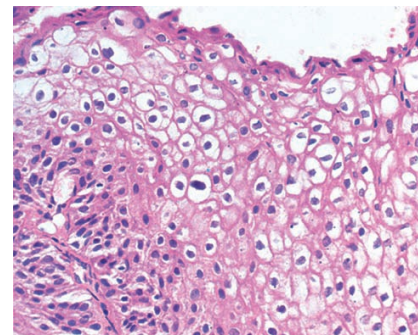
Diagnosis: Choriocarcinoma



[6] PATH - Pathology of Uterine Cervix

A 29-year-old woman is evaluated for an abnormal cervical Pap smear. Colposcopy reveals condyloma acuminatum of the exocervix. A biopsy of the cervix is shown in the image. PCR amplification of this biopsy specimen will most likely demonstrate evidence of which of the following infectious agents?

- (A) Cytomegalovirus
- (B) Herpes simplex virus
- (C) Human papillomavirus
- (D) *Molluscum contagiosum*
- (E) *Treponema pallidum*



The answer is C: Human papillomavirus (HPV).

Condyloma acuminatum is a benign, exophytic, papillomatous lesion on the skin or mucous membranes of the lower female genital tract. HPV is a DNA virus that infects a variety of skin and mucosal surfaces to produce condylomata, which are also referred to as verrucae. HPV types 6 and 11 are detected in over 80% of macroscopically visible condylomata. Several strains of HPV are now considered the major etiologic factor in the development of squamous cell cancer in the female lower genital tract. Types 16, 18 and 31 are the most representative high-risk types linked to intraepithelial neoplasia and invasive cancer. The vacuolated cells in the cervical

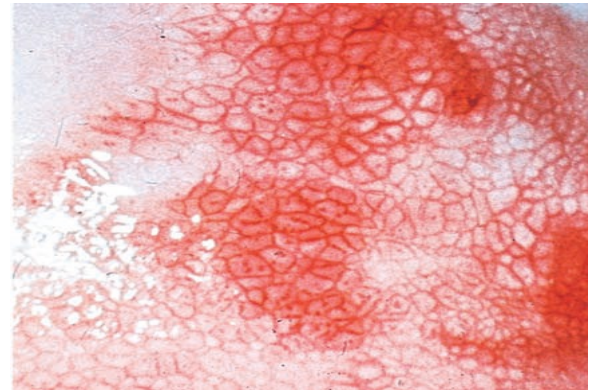
biopsy (see photomicrograph) are typical of HPV infection and are termed **koilocytes**. The other pathogens do not infect the cervix and do not produce this histopathologic appearance.

Diagnosis: Condyloma acuminatum

A routine cervical Pap smear taken during a gynecologic examination of a 31-year-old woman shows numerous, loosely arranged cells with high nuclear-to-cytoplasmic ratio. Colposcopy shows white epithelium, punctation, and a mosaic pattern in the transformation zone (shown in the image).

Which of the following is the most likely diagnosis?

- A) Adenocarcinoma of endocervix
- B) Chronic cervicitis
- C) Clear cell adenocarcinoma
- D) Dysplasia of the cervix
- E) Herpes simplex virus infection



The answer is D: Dysplasia of the cervix.

Cervical intraepithelial neoplasia is defined as a spectrum of intraepithelial changes that begins with minimal atypia and progresses through stages of more marked intraepithelial abnormalities to invasive squamous cell carcinoma. Dysplasia and carcinoma in situ can often be detected on colposcopic examination by signs associated with their altered epithelial and vascular changes: epithelial mosaicism (irregular surface resembling inlaid woodwork) and vascular dots differentiated from the surrounding tissue surface by color and texture. The other choices do not demonstrate these gross morphologic features, although they may share dysplastic morphology.

Diagnosis: Cervical intraepithelial neoplasia

A 31-year-old Haitian woman is evaluated for infertility. Pelvic examination shows a markedly enlarged vulva, inguinal lymph node enlargement, and rectal stricture. Biopsy of an inguinal lymph node reveals necrotizing granulomas, neutrophilic infiltrates, and inclusion bodies within macrophages. Which of the following is the most likely etiology of infertility in this patient?

- (A) *Chlamydia trachomatis*
- (B) *Gardnerella vaginalis*
- (C) *Molluscum contagiosum*
- (D) *Mycobacterium tuberculosis*
- (E) *Treponema pallidum*

The answer is A: Chlamydia trachomatis.

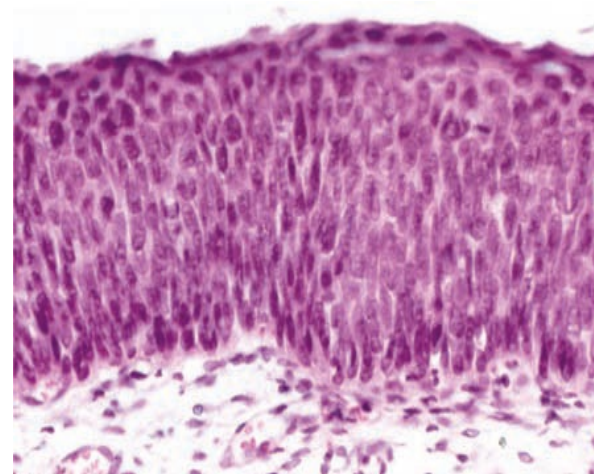
Lymphogranuloma venereum is a sexually transmitted infection that is caused by *C. trachomatis*. This organism has been found in the genital tract of about 8% of asymptomatic women and in 20% of women presenting with symptoms of a lower

genital tract infection. After a few days to a month, a small painless vesicle forms at the site of inoculation. It heals rapidly, and in many instances, the vesicle is not even noticed. The second stage presents with bilaterally enlarged inguinal lymph nodes that may rupture and form suppurative fistulas. In some untreated patients, a third stage appears, which causes lymphatic obstruction and resulting genital elephantiasis and rectal strictures. *Mycobacterium tuberculosis* (choice D) induces granulomatous inflammation but does not feature inclusion bodies. *Gardnerella vaginalis* (choice B) causes nonspecific vaginitis. *Molluscum contagiosum* (choice C) does not involve the lymph nodes. *Treponema pallidum* (choice E) does not cause granulomas.

Diagnosis: Lymphogranuloma venereum

A 36-year-old woman is evaluated for an abnormal Pap smear. A cervical biopsy shows atypical squamous cells throughout the entire thickness of the epithelium, with no evidence of epithelial maturation (shown in the image). The basal membrane appears intact. What is the appropriate diagnosis?

- (A) Clear cell adenocarcinoma
- (B) Invasive squamous cell carcinoma
- (C) Mild dysplasia (cervical intraepithelial neoplasia [CIN]-1)
- (D) Severe dysplasia (CIN-3)
- (E) Squamous metaplasia of the transformation zone



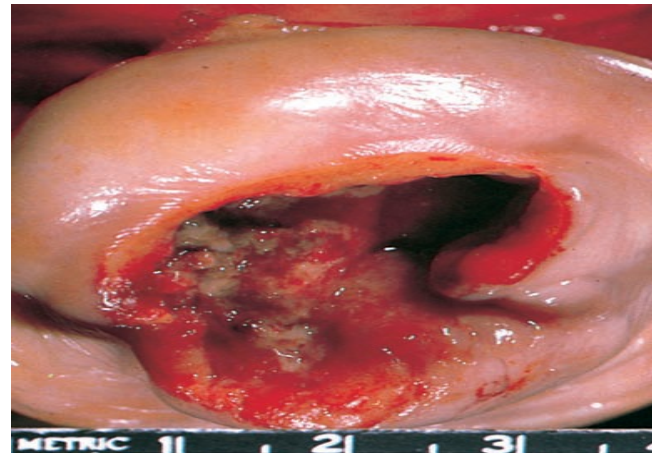
The answer is D: Severe dysplasia (CIN-3).

The normal process by which the cervical squamous epithelium matures is disturbed in CIN, as evidenced morphologically by changes in cellularity, differentiation, polarity, nuclear features, and mitotic activity. In CIN-1 (mild dysplasia), the most pronounced changes are seen in the basal third of the epithelium. However, in this case, abnormal cells are present throughout the entire thickness of the epithelium. In CIN-2 (moderate dysplasia, choice C), most of the cellular abnormalities are in the lower and middle thirds of the epithelium. CIN-3 is synonymous with severe dysplasia and carcinoma in situ and shows abnormal cells occupying the full thickness of the epithelium, with no evidence of epithelial maturation. Invasive carcinoma (choice B) features extension of neoplastic cells through the basal membrane. Dysplasia is not synonymous with squamous metaplasia (choice E).

Diagnosis: Cervical intraepithelial neoplasia

A 28-year-old woman, who is 28 weeks pregnant, presents with vaginal bleeding. She does not have a history of uterine contractions. Pelvic examination reveals bright red blood in the endocervical canal. An ulcerated exophytic mass is identified on the left side of the cervix. There is no evidence of direct tumor extension into the

parametrium. The pelvic lymph nodes are slightly enlarged, raising the possibility of nodal involvement by the tumor. A Caesarian section is performed, followed by a radical hysterectomy. The cervix is shown in the image. Which of the following is the best prognostic indicator of survival in this patient?



- (A) *BRCA* gene mutation
- (B) Degree of keratinization
- (C) Nodal involvement
- (D) Presence of carcinoembryonic antigen (CEA) in serum
- (E) Small cell rather than large cell carcinoma

The answer is C: Nodal involvement.

Squamous cell carcinoma is by far the most common type of cervical cancer. In the earliest stages of cervical cancer, patients complain most frequently of vaginal bleeding after intercourse or douching. With more advanced tumors, the symptoms are referable to the route and degree of spread. The clinical stage of cervical cancer is the best prognostic index of survival. Radical hysterectomy is favored for localized tumor, especially in younger women; radiation therapy or combinations of the two are used for more advanced tumors. Histologic or cytologic findings (choices B and E) are of secondary importance. CEA (choice D) is not typically expressed by squamous carcinoma cells.

Diagnosis: Cervical cancer

[7] PATH - Polycystic ovarian syndrome & Endometriosis

A 36-year-old woman presents with infertility. She complains of having had dull pelvic pain for 9 months, which is accentuated during menstruation. Physical examination and endocrinologic studies are normal. Laparoscopy reveals multiple, small hemorrhagic lesions over the surface of both ovaries and fallopian tubes and abundant pelvic scarring. Which of the following is the most likely diagnosis?

- (A) Borderline serous tumor
- (B) Ectopic pregnancy
- (C) Endometriosis
- (D) Metastatic cervical carcinoma
- (E) Pelvic inflammatory disease

The answer is C: Endometriosis.

Endometriosis refers to the presence of benign endometrial glands and stroma outside the uterus. It afflicts 5% to 10% of women of reproductive age and regresses following menopause. With repeated cycles, hemorrhage, and the onset of fibrosis, the affected surface may take on a grossly brown discoloration (“powder burns”) and form cysts up to 15 cm in diameter, which contain chocolate-colored material (“chocolate cysts”). The other choices do not present as small hemorrhagic lesions in these anatomic sites.

Diagnosis: Endometriosis

The cystic follicles which present in the sub-capsular cortex in case of polycystic ovary syndrome are bounded by:

- A. Granulosa cells internally and prominent outer theca externa layer externally.
- B. Theca interna internally and prominent outer theca externa layer externally.
- C. Granulosa cells internally and prominent outer theca interna layer externally.
- D. Stroma of the ovary internally and Granulosa cells externally.

The Answer is: C



MICROBIOLOGY

1- a pregnant women was exposed to a cat feces in her 1st trimester,her baby had chorioenteritis, hydrocephalus, and intracranial calcification, what is the diagnosis?

- A. Parvovirus
- B. Rubella
- C. Toxoplasmosis

Ans: c

2- which one of the following treatment is recommended in case of genital herpes infection:

- A. Acyclovir
- B. Penicillin G
- C. Spiramycin

Ans a

3- The rate of transmission of the infection from the mother to the baby is high during the:

- A. 1st trimester.
- B. 2nd trimester.
- C. 3rd trimester.

Ans c

4- a pregnant women was delivery baby with cataract , deafness , cardiac abnormality .. What is the cause ?

- A. Parvovirus
- B. Rubella
- C. Toxoplasmosis

Ans : b

A pregnant women was delivery baby with Microcephaly periventriculr calcifications hearing loss, what is the causative organism ?

- A. Parvovirus
- B. Rubella
- C. Toxoplasmosis
- D. Cytomegalovirus

Ans d

Vulvovaginitis

1) A woman is complaining about a grey to white frothy malodorous vaginal discharge. On examining the vaginal discharge under the microscope, a motile organism was seen. Which of the following is the method could detect the movement of organism ?

- a) Gram staining of the vaginal smear
- b) Wet Prep
- c) pH measurement
- d) Whiff amine test

ans:B

3) A patient came with fishy - smelling, Milky - white to Gray discharge was found, what is the treatment?

- a. Ceftriaxone
- b. Metronidazole
- c. Flucanazole
- d. Vancomycin

ans:B

Obstetrics

1- Which of the following terms express a man who doesn't produce sperms at all in the semen:

- A- Oligospermia.
- B- Hypospermia.
- C- Azoospermia.
- D- Asthenospermia.

Ans c

2- Which of the following states will lead to DECREASE levels of

FSH:

- A- Hypothyroidism.
- B- Hypoprolactinemia.
- C- Hyperthyroidism.

Ans a

3- Which of the following results is correct in case of PCO:

- A- Decrease LH.
- B- Increase Estrogen.
- C- Decrease testosterone.
- D- Decrease Estrogen.

Ans:B

PSYCHIATRY

The percentage of adolescents who experience psychological maladjustment is:

- A- 80%
- B- 20%
- C- 50%
- D- 60%

Ans b

2- Puberty is considered to mark the beginning of:

- A- Adulthood.
- B- Childhood.
- C- Adolescence.

Ans c

3- The middle stage of adolescence :

- A-From 12 to 16
- B- From 14 to 18
- C- From 14 to 17

Ans c

If you have any questions you want to add, please send it to

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Good luck

Team Leaders :

Khalid Al-Osaimi & Lulu Al-Obaid

اللهم علّمنا ما ينفَعنا وانفَعنا بما علّمتنا وزدنا علماً وعملاً وأجعل ما علّمتنا حجةً لنا لا علينا