

إنَّ الخيلَ إذا شارفتْ نهايةَ المضمارِ بذلتْ قُصارى جهدها لتفوزَ بالسِّباقِ، فلا تكنُ الخيلُ أفطنَ منك.

فإنما الأعمال بالخواتيم

- ابن الجوزي.

إعداد:



Pathology

Female

A 26-year-old woman presents with infertility. She complains of having had dull pelvic pain monthly. Physical examination and endocrinologic studies are normal. Laparoscopy reveals multiple small hemorrhagic lesions over the surface of both ovaries along with foci of scarring. Which of the following is the most likely diagnosis? Select one:

- a. Borderline serous tumor
- b. Ectopic pregnancy
- c. Endometriosis
- d. Metastatic cervical carcinoma
- e. Pelvic inflammatory disease

ANS : B

A 40-year-old woman presents with a 5-year history of dysmenorrhea. 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? Select one:

- 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

ANS: b

23-year-old female had started to notice a lump in her left breast for the past year. Clinician examined a 2.5-cm, well- circumscribed and freely mobile mass is palpated in the upper outer quadrant. Examining the mass microscopically after excision revealed a proliferation of intralobular fibroblasts, that distorts the tubular epithelial cells into elongated slitlike structures. What is the most likely diagnosis? Select one:

- a. Invasive ductal carcinoma
- b. Phyllodes tumor
- c. Fibroadenoma
- d. Fibrocystic changes
- e. Acute mastitis

ANS :c

A 25-year-old obese woman who has complained of irregular menstrual periods and pronounced facial hair. On gynecologic examination, both ovaries are found to be symmetrically enlarged. This patient's ovaries would likely show which of the following pathologic findings? Select one:

- a. Bilateral endometriomas
- b. Cystic teratoma
- c. Mucinous cystadenoma
- d. Serous cystadenoma
- e. Subcapsular cysts

ANS : e

A 43-year-old woman presents with a 6-month history of increasing abdominal girth. On physical examination, there is ascites. Pelvic examination reveals a left adnexal mass. A 6-cm

ovarian tumor is removed. The tumor is solid and white. Which of the following is the appropriate diagnosis? Select one:

- a. Fibroma
- b. Granulosa cell tumor
- c. Leiomyosarcoma
- d. Papillary cystadenoma
- e. Sertoli-Leydig cell tumor

ANS : a

All of the following is correct about the clinical presentation of breast diseases EXCEPT? Select one:

- a. All palpable breast masses require evaluation
- b. Infections are common during lactation and breastfeeding.
- c. Gynecomastia is the only common symptom in males.
- d. One centimeter (10mm) mass is usually palpable and mammographically detected
- e. Most painful breast masses are benign.

ANS : D

A 59-year-old woman presents with a 2-year history of vulvar itching and burning. Physical examination reveals a red, moist lesion of the labium major. Biopsy reveals clusters of pale vacuolated cells within the epidermis that stain positively for periodic acid-Schiff (PAS). Which of the following is the most likely diagnosis? Select one:

- a. Extramammary Paget disease
- b. HPV-induced papilloma
- c. Verrucous carcinoma
- d. Vulvar intraepithelial neoplasia
- e. Vulvar melanoma

ANS : A

Which of the following ovarian lesions needs follow up for long period due to higher recurrence rate (even years) after the initial treatment? Select one:

- a. Dysgerminoma

- b. Serous cystadenoma
- c. Granulosa cell tumor
- d. Mucinous cystadenoma
- e. Sertoli-Leydig cell tumor

ANS: b

A 59-year-old woman presents with a 2-year history of vulvar itching and burning. Physical examination reveals a red, moist lesion of the labium major. Biopsy reveals clusters of pale plump vacuolated cells within the epidermis that stain negatively for periodic acid-Schiff (PAS). Which of the following is the most likely diagnosis? Select one:

- a. Extramammary Paget disease
- b. HPV-induced papilloma
- c. Verrucous carcinoma
- d. Vulvar intraepithelial neoplasia
- e. Vulvar melanoma

ANS : E

All the following features are false regarding leiomyosarcoma, except? Select one: a. It is the most common malignant neoplasm in the uterus b. Nuclear pleomorphism is one of the most diagnostic features for this lesion c. Not associated with metastasis d. Presented as multiple lesions e. Mitotic figures/ 10HPF is one of the most diagnostic features for this lesion

135) .All the following are Surface Epithelial Tumors arising in the ovary, except? Select one:

- a. Serous cystadenoma
- b. Serous cystadenocarcinoma
- c. Borderline mucinous tumour
- d. Endometrioid tumours
- e. Dysgerminoma

ANS : e

A 25-year-old woman delivered a normal term infant three weeks ago, and she is breastfeeding. She noticed the area around the nipple is becoming progressively engorged, erythematous and tender. One of the following is incorrect about this lesion? Select one:

- a. It is almost exclusively a lactation associated lesion.

- b. Inflammatory carcinoma should be considered in this case
- c. Organism typically gains entry via nipple fissures resulting from breastfeeding
- d. Mother is always advised to carry on breastfeeding
- e. It can be complicated by lactational abscess.

ANS : b

High risk HPV types implicated in cervical intraepithelial lesions are? Select one:

- a. 6 and 11
- b. 5 and 8
- c. 16 and 18
- d. 19 and 22
- e. 6 AND 16

ANS : C

One of the following is correct about the clinical classification of breast carcinoma? Select one:

- a. The majority of tumors belong to of the triple negative category
- b. The expression of HER2 (HER2 gene amplification) has no role in therapy
- c. Triple negative tumors respond significantly on Tamoxifen
- d. Cancers overexpress HER2 are distinct and highly proliferative
- e. Almost all lobular carcinomas overexpress HER2

ANS : D

fibroadenomas and phyllodes are the two main stromal neoplasms in the breast, all of the following is correct about these two tumors EXCEPT?

- a. Fibroadenomas are estrogen sensitive.
- b. In fibroadenomas acini become elongated slitlike structures.
- c. They arise from interlobular stroma of the breast.
- d. Phyllodes are more cellular and tend to have infiltrative borders.
- e. Both are considered biphasic tumors.

ANS : C

All the following IS correct regarding cervical Intraepithelial Neoplasia (CIN), except?

- a. The peak incidence at 30s.
- b- HPV (18 subtype) can be detected in CIN.
- c. 10% of the cases of low grade squamous intraepithelial lesions (LSIL) can progress into high grade intraepithelial lesions (HGIL).
- d. High risk subtypes of HPV express large amounts of E6 protein that inhibits tumor suppressor gene RB.
- e. HPV (16 subtype) can be detected in CIN.

ANS : D

All the following are diagnostic features of leiomyosarcoma, except?

- a. Microscopically. Tumor necrosis is identified.
- b. Leiomyosarcoma presents as multiple masses.
- c. Microscopically: Cytological atypia is present.
- d. Microscopically: Numerous mitoses are detected.
- e. Leiomyosarcoma always arises de novo.

ANS :b

All the following are characteristic features for Lichen Sclerosus. except?

- a. Lichen sclerosus only affects postmenopausal women.
- b. Lichen sclerosus appears as smooth, white plaques (termed leukoplakia).
- c. Lichen sclerosus is characterized microscopically by thinning of the epidermis, hydropic degeneration of the basal cells and dermal fibrosis.
- d. The pathogenesis is uncertain and could be associated with autoimmune disorders.
- e. (1%) of women with symptomatic lichen sclerosus develops squamous cell carcinoma.

ANS : A

All the following is correct regarding Partial mole. except?

- a. It is compatible with early embryo formation.
- b. It may contain fetal parts & some normal chorionic villi.
- c. Chorionic epithelial cells almost always diploid (e.g., 69,XXY).
- d. Microscopically. it is composed of cystically dilated chorionic villi with focal trophoblastic proliferation
- e. Partial mole has the best prognosis of gestational trophoblastic diseases.

ANS : C

Megs Syndrome consists of one from the following?

- a. Ovarian fibroma and pneumothorax.

- b. Ovarian Sertoli Leydig cell tumor and ascites.
- c. Ovarian fibroma, ascites and hydrothorax.
- d. Ovarian granulosa cell tumor and hydrothorax only.
- 8. Ovarian thecoma and ascites only.

ANS : C

All the following are true regarding metastases to the ovary. except?

- a. They are mostly bilateral.
- b. The size of the ovary is mostly larger than 10cm.
- c. Multiple small nodules are seen on the ovarian surface.
- d. Hilar Involvement is common In a hematogenous spread.
- e. One of the metastatic primaries is breast referred as Krukenberg tumor.

ANS : B

Germ cell tumors may differentiate toward all the following, except?

- a. Oogonia (dysgermlinoma)
- b. Granulosa-theca cell tumor
- c. Yolk sac (endodermal sinus tumor)
- d. Choriocarcinoma.
- e. Multiple fetal tissues (teratoma).

ANS :B

Renal

30-year-old female diagnosed clinically as diabetic nephropathy. Urine analysis was positive for RBCs and albumin. This condition may result from..... ? Select one:

- a. Defect in the renin- angiotensin — aldosterone system
- b. Damage in the juxtaglomerular apparatus
- c. Disrupted glomerular basement membrane and renal barrier
- d. The intra and extra glomerular mesangial cells are affected
- e. The collecting ducts are affected

ANS : c

A 50-year-old man is found to have blood in his urine during a routine checkup. An enlarged right kidney is found on X-ray examination. A tru cut biopsy of the renal mass shows glycogen-rich tumor cells. Molecular studies would most likely identify mutations in which of the following growth regulatory genes? Select one:

- a. ADPKD b. IGF-2 C. PAX6 d. VHL e. WT1

ANS : d

A 9-year-old presented to the clinic with sensorineural deafness, posterior cataracts, and corneal dystrophy. A urinalysis revealed microscopic hematuria and no proteinuria. Many family members are presented with various renal diseases, especially males. Microscopic examination of a renal biopsy showed glomerular capillaries with irregular basement membrane thickening, splitting and lamination. Which of the following is the most likely diagnosis? Select one:

- a. Berger Disease
- b. Alport syndrome
- c. Minimal change disease
- d. Autosomal dominant polycystic kidney disease
- e. Goodpasture syndrome

ANS: b

A 55-year-old male known to have atherosclerosis and ischemic heart disease suffered multiple injuries as result of a road traffic accident. In addition to his fractures he suffered an internal bleeding and there is difficulty maintaining adequate blood pressure and tissue perfusion for 48 hours. Serum urea nitrogen increases to 44 mg/dL (normal 7-20 mg/dL) and creatinine to 2.2 mg/dL(normal 0.9-1.3) . Granular and hyaline casts are present on microscopic urinalysis. Which of the following renal lesions is most likely to be present in this situation? Select one:

- a. Minimal change disease
- b. Hyaline arteriolosclerosis
- c. Chronic kidney disease
- d. Acute tubular necrosis
- e. Chronic pyelonephritis

ANS : D

A 39-year-old man has been progressively fatigue for 4 weeks. On physical examination he has a blood pressure of 120/85 mm Hg and pitting edema of the lower extremities. Urinalysis shows proteinuria, no hematuria. He also had a 24 hour urine protein of 4.1 gm. His serum urea nitrogen is elevated. His hepatitis B surface antigen is positive. Electron microscopy of a kidney biopsy reveals subepithelial deposits with glomerular basement membrane reaction to them. Which of the following is the most likely diagnosis? Select one:

- a. Crescentic Glomerulonephritis
- b. Acute Postinfectious Glomerulonephritis

- c. Minimal change disease
- d. Acute tubular necrosis
- e. Membranous nephropathy

ANS : E

A 52-year-old female died from hemorrhagic cerebral stroke. She has been progressively ill in the last six months with multiple emergency visits where she found to have high blood pressure reaching 250/154 mmHg. Blood tests showed high serum urea nitrogen and creatinine. At autopsy the kidneys are bilaterally small with pinpoint petechial hemorrhages on the surface. Which of the following findings you would most likely see upon examining her kidneys under with the light microscope? Select one:

- a. Leukocytoclastic vasculitis
- b. Hyperplastic arteriolosclerosis
- c. Eosinophilic tubulointerstitial nephritis
- d. Diffuse uniform thickening of the capillary wall
- e. Collapsed glomerular tufts and crescents formation

ANS: B

The majority of malignant tumors of the urinary bladder are histologically classified as? Select one:

- a. Fibrosarcoma
- b. Adenocarcinoma
- c. Squamous cell carcinoma
- d. Choriocarcinoma
- e. Transitional cell carcinoma

ANS :E

Secondary causes of nephrotic syndrome include all of the following except? Select one:

- a. Diabetes mellitus
- b. Systemic lupus erythematosus
- c. Minimal change disease
- d. Amyloidosis
- e. Cryoglobulinemia

ANS : C

To define nephrotic syndrome, the daily urinary protein loss should exceed? Select one:

- a. 2g
- b. 3g
- c. 4g
- d. 5g
- e. 6g

ANS : B

A 60-year-old man presents with a feeling of fullness in his abdomen and a 5-kg weight loss over the past 6 months. Abdominal CT scan shows 3 masses in both kidneys. Microscopic examination of the excised specimen revealed masses with various degrees of papilla formation with fibrovascular cores. Which of the following molecular abnormalities is most likely to be found in tumor cell DNA? Select one:

- a. Homozygous loss of the von Hippel—Lindau (VHL) gene
- b. Mutational activation of the MET proto-oncogene
- c. Trisomy of chromosome 7 associated genes
- d. Integration of human papillomavirus-16 (HPV-16)
- e. Microsatellite instability

ANS : B

26-year-old previously healthy man developed a cough with bloody sputum along with decreased output of dark urine over the past 3 days. On physical examination his blood pressure is 160/90 mmHg. Laboratory studies show serum creatinine 3.6 mg/dL (normal C.9-1.3) and BUN 40 mg/dL(normal 7-20 mg/dL). A urinalysis reveals hematuria and mild proteinuria, no glucose, and no ketones. On urine microscopic examination there are numerous RBC casts. Which of the following Immunofluorescence (IF) findings on renal biopsy is most likely to be present in this man? Select one:

- a. Mesangial deposition of IgA
- b. Irregular granular deposition of C3
- c. Negative Immunofluorescence
- d. Granular deposits contain complement factors
- e. Linear deposits of IgG in the glomerular basement membrane

Ans : e

A 50-year-old man is found to have blood in his urine during a routine checkup. An enlarged right kidney is found on X-ray examination. A tru cut biopsy of the renal mass shows glycogen-rich tumor cells. This malignant neoplasm most likely originates from which of the following tissues in the kidney? Select one:

- a. Glomeruli
- b. Juxtaglomerular cells
- c. Lymphatics
- d. Renal papillae

e. Renal tubules

Ans : e

A 42-year-old male presented with fever, sweating and dry cough and treated as pneumonia with 1g of amoxicillin three times a day, to which he responded very well. Two weeks later his fever is back, this time with erythematous rash and decreased urinary output. Laboratory studies show creatinine 2 g/dl (normal 0.9 to 1.3) and eosinophilia. Urine analysis shows hematuria and mild proteinuria and some eosinophiles. Which of the following is the most likely diagnosis? Select one:

- a. Acute pyelonephritis
- b. Acute tubular injury
- c. IgA nephropathy
- d. Drug-induced interstitial nephritis
- e. Post-streptococcal glomerulonephritis

ANS : c

A 7-year-old girl presented with her mother who has noticed she has been less active in the last week and there is an increased puffiness around her eyes in the last three days. On examination she has periorbital edema. No fever. A urinalysis proteinuria and no blood, and no ketones. No WBC or RBC. Her condition significantly improves after a course of corticosteroid. Which of the following finding you will most likely see upon examining her kidneys? Select one:

- a. Accentuated lobular appearance of the glomeruli
- b. Collapsing glomerulopathy
- c. Diffuse effacement of the foot processes of the podocytes
- d. Diffuse thickening of the capillary wall
- e. Crescents formations in glomeruli

ANS : c

One of the following is incorrect about end-stage kidney disease? Select one:

- a. It is mainly caused by the maladaptive mechanisms by the intact nephrons
- b. Maladaptive changes include nephron autophagy in order to decrease size and demands
- c. Maladaptive changes include increases in single-nephron GFR and blood flow
- d. Major histologic change of progressive renal damage is Tubulointerstitial fibrosis
- e. Major histologic change of progressive renal damage is Focal segmental glomerulosclerosis

ANS : D

5) The light microscopic picture of post-streptococcal glomerulonephritis include the followings EXCEPT?

- a. proliferation of parietal epithelial cells.
- D. proliferation of visceral epithelial cells.

- c. proliferation of endothelial cells.
- d. proliferation of mesangial cells.
- e. neutrophilic infiltration.

ANS : A

Male

A 34 -year-old man has had heaviness in testis for 6 months. Examination reveals enlargement left testis. Laboratory revealed normal serum HCG and alpha-fetoprotein (AFP). Left testis is excised through orchiectomy and on sectioning showed soft, well-demarcated white mass, no hemorrhage or necrosis. He receives radiation therapy with good response. Which of the following neoplasms he is most likely to have? Select one:

- a. Seminoma.
- b. Yolk sac tumor.
- c. Leydig cell tumor.
- d. Embryonal carcinoma
- e. Choriocarcinoma.

ANS : A

A mother brought her 18 month old child to the pediatric clinic worried about a recent asymmetric enlargement of his scrotum. Physical examination revealed a well circumscribed, 2cm mass in the left testis. Laboratory revealed normal serum HCG and high serum alpha-fetoprotein (AFP). Histologic examination of this mass after orchiectomy shows low cuboidal to columnar epithelial cells that form microcysts, some of which contain eosinophilic hyaline globules structures resemble primitive glomeruli. What is the most likely diagnosis?

- a. Seminoma.
- b. Yolk sac tumor
- c. Leydig cell tumor.
- d. Embryonal carcinoma.
- e. Choriocarcinoma.

Ans : b

In the pediatric population, which of the following germ cell tumor when present in its pure form. is considered to be a benign tumor?

- a. Choriocarcinoma. b. Embryonal carcinoma. c. Seminoma.
- d. Yolk sac tumor. e. Teratoma.

ANS : E

Physiology

1-The renal blood flow is? Select one:

- a. 5% of the cardiac output.
- b. Higher in the medulla than in the cortex.
- c. Markedly affected by arterial blood pressure whatever its level.
- d. Decrease by sympathetic stimulation.
- e. Auto regulated between 20 and 120 mmhg.

Ans:d

2-The "diluting segment" of the nephron is? Select one:

- a. PCT.
- b. Descending limb of loop of Henle.
- c. Ascending limb of loop of Henle.
- d. Cortical collecting duct.
- e. Distal convoluted tubule.

Ans:c

3-When GFR fall , the Na excretion well ? Select one:

- a. Fall
- b. Increase
- c. Fall followed by increase
- d. No change
- e. Increase followed by sharp decrease

ans:c

4-Renal blood flow is ? Select one:

- a. 0.8 - 1.2 l/min
- b. 1.2 — 1.3 L/Min
- c. 1.5 — 2 L/Min
- d. 2-2.5 L/Min
- e. 5-6 L/Min

ans:b

5-Substance commonly used to measure RBF ? Select one:

- a. Inuline
- b. Creatinine
- c. Glucose

d. Para-amino- hippuric acid

e. Amino acids

ans:a

6-Glucose reabsorption is? Select one:

a. Passive in the proximal convoluted tubules.

b. By secondary active transport in the proximal convoluted tubules.

c. Co transported with sodium at the basal border of proximal convoluted tubules.

d. Has no tubular maximum.

e. Passive in the distal convoluted tubules.

Ans:b

7-Removal of drugs from blood by dialysis is enhanced by the following except? Select one:

a. Large surface area or dialysis membrane.

b. Drug MW is 800 daltons.

c. increased flow rate of dialysis fluid into dialysis machine.

d. Increased porosity of dialysis membrane.

e. Drug poorly bound to plasma proteins.

Ans:b

8-The following are the characteristic of substances suitable for measuring G F R, except?

Select one:

a. Freely filtered

b. Stored in kidney

c. Not protein bound

d. Neither reabsorbed nor secreted

e. Metabolized by kidney

ans:e

9-All of the following is true about the glomerular capillaries, EXCEPT? Select one:

a. Low pressure capillary bed.

b. Drain into efferent arteriole.

c. Highly permeable with wide fenestrae.

d. Provide wide surface area for filtration.

e. Engulfed with bowman capsule

ans:a

10- The main site which is responsible for excretion of urea and creatinine is? Select one:

a. Loop of henle

b. Glomeruli

- c. Proximal convoluted tubule
- d. Collecting duct
- e. Distal convoluted tubule

ans:b

11-Progesterone produces the following functions, except? Select one:

- a. It helps implantation of fertilized ovum.
- b. Helps formation of early placenta.
- c. Inhibits uterine contraction during pregnancy.
- d. Responsible for growth of nipples.
- e. Thermogenic.

Ans:d

12-Factor affecting G F R are? Select one:

- a. Changes in renal blood flow
- b. Changes in glomerular capillary hydrostatic pressure
- c. Ureteric obstruction
- d. Combined effects of Changes in renal blood flow, Changes in glomerular capillary hydrostatic pressure and Ureteric obstruction.
- e. Changes in respiratory rate.

Ans:d

13-Progesterone hormone? Select one:

- a. Stimulates LH secretion.
- b. Has thermogenic effect.
- c. Stimulates uterine contraction during pregnancy.
- d. Makes the cervical mucus thin and alkaline.
- e. Decrease blood glucose level

ans:b

14-Ovulation is associated with sudden rise in? Select one:

- a. prolactin
- b. estrogen
- c. LH
- d. Oxytocin
- e. Growth hormone

ans:c

15-ADH produces? Select one:

- a. Increase H₂O reabsorption

- b. Decrease sodium reabsorption
- c. Decrease Angiotensin II formation
- d. Increase sodium reabsorption
- e. Increase H⁺ secretion

ans:a

16-..triggers milk release in lactating females? Select one:

- a. glucagon
- b. oxytocin
- c. luteinizing hormone
- d. follicle-stimulating hormone
- e. Prolactin

ans:b

17- With respect to renal handling of glucose? Select one:

- a. Normally, All glucose present in glomerular filtrate is partially reabsorbed during its passage in P.C.T.
- b. Glucose Reabsorption in PCT is a primary active transport mechanism not dependent on sodium transport.
- c. Glucose and other sugars like galactose, mannose and fructose show competition on the same carrier.
- d. Higher the plasma glucose level, the more its amount reabsorbed.
- e. The kidney not the liver is the main site of glucose homeostasis.

ans:d

18- Regarding urea permeability along different renal tubules, all are true except? Select one:

- a. The permeability to urea is high in P.C.T.
- b. The descending part of loop of Henle is of low permeability to urea.
- c. The DOT and early part of collecting duct: are impermeable to urea
- d. the medullary part of collecting ducts permeable to urea
- e. It is the same in all segments

ans:e

19- Along the PCT? Select one:

- a. Glucose is secreted.
- b. 60-70% Of glucose filtered is reabsorbed.
- c. Complete re-absorption of all glucose filtered.
- d. Passive re-absorption of filtered amino-acids.

e. Filtrate is hyperosmotic

ans:c

20-Spermatogenesis begins in the ? Select one:

- a. Uterine horn.
- b. Rete testes.
- c. Seminiferous tubules.
- d. Seminal vesicles.
- e. Prostate

ans:c

21-Regarding Renal handling of water? Select one:

- a. Water transport is restricted to PCT.
- b. Water transport occurs by osmotic diffusion initiated by solute re-absorption.
- c. Obligatory water re-absorption is under the control of ADH.
- d. Maximumly in DCT.
- e. Not detected in PCT

ans:b

22- Active reabsorption of glucose occurs in ? Select one:

- a. Proximal tubule
- b. Loop of Henle
- c. Distal tubule
- d. Collecting duct
- e. Bowman capsule

ans:a

23-in a dehydrated subject; "Hypotonic "Uoid will be round in the:

- a. Glomerular filtrate
- b. Proximal tubule
- c. Loop of Henle
- d. Distal convoluted tubule
- e. Collecting duct

ANS: C

24-Mechanism of menses is triggered by?

- a. Decreased estrogen
- b. Vasoconstriction oi the spiral arteries
- c. Ischemic changes and necrosis of functional endometrium

- d. increased progesterone level
- e. Decreased progesterone level

ANS:A

25- The ascending limb of the Loop of Henle is?

- a. impermeable to Na⁺
- b. Involved in active transport of K⁺ into the lumen
- c. Involved in active transport of Cl⁻ out of lumen
- d. Involved in active transport of Na⁺ into lumen
- e. Hypotonic at the top
- f. Actively transports water

ANS:E

26-In the normal kidney?

- a. one would expect to find more than one million nephrons
- b. proximal tubule cells do not contain brush border
- c. proximal tubular cells possess fewer mitochondria than distal tubular cells
- d. only 20 % of nephrons have a loop of Henle
- e. the slit membrane of the Bowman's capsule has pores of 5nm diameter

ANS:A

27- All the following are signs of ovulation EXCEPT?

- a. Appearance of human chorionic gonadotrophin in the urine
- b. Increased body temperature at the proliferative phase of the cycle
- c. Proliferation of the vaginal epithelia and infiltration with leukocytes
- d. Thick & tenacious cervical secretion
- e. Increased level of progesterone at the second half of the cycle

ANS:A

28-Glycosuria is most likely to occur with?

- a. increased GFR and increased blood glucose level
- b. decreased GFR and increased blood glucose level
- c. decreased GFR and decreased blood glucose level
- d. increased GFR and decreased blood glucose level
- e. no change to GFR and increased blood glucose level

ANS:A

29-Increase in GFR occurs with which of the following conditions?

- a. Increased sympathetic stimulation
- b. Decreased renal blood flow

- c. Hypoproteinemia
- d Ureteric obstruction
- e. severe hemomage to get rid of waste products

ANS:C

BIOCHEMISTRY

1-If a case of emphysema was hospitalized showing drop in blood PH and increase in CO₂. This is a condition of? Select one:

- a. Metabolic alkalosis
- b. Respiratory alkalosis
- c. Metabolic acidosis
- d. Respiratory acidosis
- e. Compensated respiratory alkalosis

ANS:D

2-If a patient undergoing a prolonged surgery and have repeated blood transfusion during and after surgery, which condition will he have if you know that the transfused blood contain citrate? Select one:

- a. Compensated respiratory alkalosis
- b. Metabolic alkalosis
- c. Respiratory alkalosis
- d. Respiratory acidosis
- e. Metabolic acidosis

ANS:B

3-The atoms of purine ring are derived from different precursors in the pathway of de novo synthesis. Which of the following is not of theses precursors? Select one:

- a. CO₂
- b. Glutamine
- c. Aspartate
- d. Arginine
- e. Glycine

ANS:D

4-) In sever acidosis, the kidneys? Select one:

- a. Excrete bicarbonate.
- b. Forms ammonia.
- c. Prevent excretion of keto-acids.

- d. Reabsorb H⁺.
- e. Inhibits excretion of titratable acids

ANS:B

5-Metabolic acidosis is caused by all of the following, Except? Select one:

- a. Breath holding.
- b. Diabetic keto-acidosis.
- C. Heavy exercise.
- d. Cardiac arrest.
- e. Renal failure

ANS:A

6-The kidneys keep acid base balance via doing all of the following except? Select one:

- a. Excretion of non-volatile acids.
- b. Formation of ammonia.
- c. Bicarbonate re-absorption.
- d. Release of erythropoietin.
- e. Formation of acid phosphate in renal tubules

ANS:D

Microbiology

#A middle aged woman presented with fishy odour vaginal discharge shows clue cells in a wet preparation: She probably has? Select one:

- a. Bacterial vaginosis
- b. Chlamydia trachomatis
- c. Neisseria gonorrhoeae
- d. Trichomonas
- e. Cervicitis

Answer : a

#All are correct about Candida albicans, EXCEPT: Select one:

- a. One of the opportunistic fungi.
- b. Oval gram -ve dimorphic fungi.

- c. Causing vulvovaginitis in female, balanitis in male, renal & bladder infection.
- d. Cultured on SDA medium.
- e. Germ tube test is used in the diagnosis.

Answer :b

25 year old male presented to you with purulent penile discharge, dysuria and lower abdominal pain. The gram stain of the discharge showed Gram negative diplococci oxidase positive bacteria, likely cause is? Select one:

- a. Neisseria gonorrhoea
- b. Streptococcus pneumoniae
- c. E. coli
- d. S. aureus
- e. Trichomonas vaginalis

Answer :a

#In the US, chlamydia occurs more often than any other sexually transmitted infection (STI). Who can be infected with chlamydia? Select one:

- a. Only women past menopause
- b. Only men who have sex with men
- c. Any sexually active person
- d. Only pregnant women
- e. Only sexual active woman

Answer: c

All are correct regarding Trichomonas vaginalis infection EXCEPT? Select one:

- a. Cyst is the infective and diagnostic stage.
- b. In female, causing vaginitis and urethritis in female.
- c. In male, causing urethritis and prostatitis.
- d. Decreasing in lactobacilli predisposes to Trichomonas vaginalis infection.
- e. Vaginal swab and culture are helpful in the diagnosis.

Answer: a

All are true about Neisseria gonorrhoea except? Select one:

- a. Gram positive diplococci oxidase negative
- b. Can cause urethritis
- c. May involve seminal vesicles and spreads to epididymis (I. Can cause disseminated infection)
- e. Has multiple virulence factors such as pili

Answer: a

Which of the following is correct regarding candidiasis? Select one:

- a. Renal candidiasis spreads either by ascending route or hematogenous spread.
- b. Candiduria may persist after treatment due to fungal resistances.
- c. Bladder candidiasis often confused with a bacterial infection.
- d. Renal candidiasis may cause a fungus ball or an obstructive fungal mass with symptoms as renal colic.
- e. Microscopic examination of candida using 20% potassium hydroxide (KOH) preparation.

Answer: e

Pharmacology

Diuretics

1) Adverse effects resulting from the administration of Furosemide include all the following except?

- a. Hypercalcemia
- b. Hyperuricemia
- c. Hypokalemia
- d. Ototoxicity
- e. Hypomagnesemia

ans: a

2) The Thiazide diuretics have useful therapeutic effect in all of the following conditions except?

- a. Chronic edema associated with cardiac decompensation
- b. ADH-secreting pulmonary tumors
- c. Hypercalciuria

d. Diabetes insipidus

e. Hypertension

ans: b

3) One of the following diuretics is safe to use in renal failure?

a. Hydrochlorothiazide

b. Acetazolamide

c. Spironolactone

d. Furosemide

e. indapamide

ans: e

4) Furosemide is useful for the treatment of all of the conditions except?

a. Congestive heart failure

b. Acute pulmonary edema

c. Hypocalcemia

d. Hypertensive crisis

e. Edema resulting from hepatic and renal disease

ans: c

5) One of the following diuretics is useful for kidney stones?

a. Hydrochlorothiazide

b. Chlorthalidone

c. Triamterene

d. Spironolactone

e. Furosemide

ans: a

Female Sex Hormones & Contraceptives 1+ 2

1) All following are Therapeutic uses of estrogens EXCEPT?

a. Endometriosis

b. Contraception

c. Hormone replacement therapy (HRT)

d. Estrogen deficiency

e. Osteoporosis

ans: a

2) All following about contraceptives are true EXCEPT?

a. Contraceptives prevent ovulation

b. Combination pills are most effective method for contraception

c. Triphasic pills contain constant dose of estrogen and progestin

d. Side effects: thrombophlebitis

e. Contraindicated in patients with breast cancer

ans: c

3) Which of following about female sex hormones is FALSE

a. Tamoxifen is used in metastatic breast cancer in postmenopausal women

b. Raloxifene is used in treatment of osteoporosis in postmenopausal women

- c. Clomiphene is used in treatment of anovulatory infertility
- d. Medroxyprogesterone has androgenic activities
- e. Progestins are used in treatment of endometriosis

ans: d

4) All following are classes of contraceptives EXCEPT

- a. Estrogen- only pills
- b. Transdermal patch
- C. Vaginal ring
- d. Progestin-only pills
- e. Progestin intrauterine device

ans: a

5) All following are therapeutic indications of progestins EXCEPT?

- a. Contraception
- b. Osteoporosis
- c. Dysfunctional uterine bleeding
- d. Endometriosis
- e. Hormone replacement therapy

ans: b

6) All following about estrogens are true EXCEPT?

- a. Estrogen is used as second line in treatment of osteoporosis
- b. Natural estrogens are slowly metabolized in liver
- c. Synthetic estrogens have prolonged duration of action
- d. Estrogen side effect: deep vein thrombosis
- e. Estrogen can cause fluid retention

ans: b

7) All following about contraceptives are true EXCEPT?

- a. Progestin-only emergency contraceptive are better tolerated than combination pills
- b. Side effects: Myocardial infarction
- c. Side effects: Weight gain
- d. Contraindicated in renal diseases
- e. Contraindicated in liver disease

ans: d

STDS

1) Drug of choice for bacterial vaginosis is?

- a. Metronidazole
- b. Erythromycin
- c. Tetracycline
- d. Nystatin
- e. Profen

ans : a

2) Concerning STDs, BENZATHINE PENCILLIN G is the treatment of the following disease?

- a. Syphilis.

- b. Trichomoniasis.
- c. Hepatitis B.
- d. Pubic lice.
- e. Gonorrhea

ans: a

3) Concerning STDs, genital herpes can be treated by the following drug?

- a. Azithromycin.
- b. Acyclovir.
- c. Metronidazole.
- d. Benzathine penicillin G.
- e. Salicylic acid.

ans: b

4)is preventable through vaccination?

- a. syphilis
- b. gonorrhea
- c. Herpes simplex
- d. chlamydia
- e. HPV

ans: e

Histology

Renal Histology

1) Choose the CORRECT match from the followings?

- a. Macula densa ///// columnar cells lacking basement membrane found in wall of proximal convoluted tubules
- b. Mesangial cells ///// line parietal layer of Bowman's capsule
- c. Juxtaglomerular cells ///// modified smooth muscles in the wall of afferent arteriole
- d. Podocytes ///// separate from the basement membrane by capsular space
- e. Intercalated cells ///// cuboidal cells line the wall of the distal convoluted tubules

ans: c

2) All of the following is true about the glomerular capillaries, EXCEPT?

- a. Low pressure capillary bed.
- b. Drain into efferent arteriole.
- c. Highly permeable with wide fenestrae.
- d. Provide wide surface area for filtration.
- e. Engulfed with Bowman capsule

ans: a

3) Choose the INCORRECT statement from the followings?

- a. The juxta-medullary nephrons have long loop of Henle
- b. Lacis cells are key component in the blood renal barrier
- c. The afferent arterioles have larger diameter and thicker media
- d. The glomerular capillaries lined with fenestrated endothelium
- e. The distal convoluted tubules lining epithelium has no brush border

ans: b

4) Which one of the following statements is CORRECT?

- a. Podocytes line the visceral layer of Bowman's capsule and their cell body is separated from basement membrane by capsular space
- b. Distal convoluted tubules are lined by high cuboidal cells with apical brush border
- c. Juxtaglomerular cells are modified smooth muscle cells present in media of afferent arteriole
- d. Lacis cells are rich in renin granules
- e. The muscosa of the lower third of ureter is formed of two layers inner circular and outer longitudinal layers of smooth muscle

ans: c

Male genital system

1) Choose the INCORRECT match among the followings?

- a. Sertoli cells ///// secrete testicular fluid
- b. Spermatids ///// undergo second meiotic division
- c. Epididymis ///// storage and maturation of sperms
- d. Leydig cells ///// secrete testosterone
- e. Cowper's glands ///// mucus secreting glands

ans: b

2) Which of the followings does not characterize the acrosomal phase in Spermiogenesis?

- a. Nuclear elongation and condensation
- b. Formation of the flagellum
- c. Mitochondria are arranged to form the middle piece
- d. Formation and packing of the hydrolytic enzymes in the acrosomal vesicle
- e. The acrosome spreads over the anterior 1/2 of the nucleus

ans: d

3) Spermatogenesis begins in the ?

- a. Uterine horn.
- b. Rete testes.
- c. Seminiferous tubules.
- d. Seminal vesicles.
- e. Prostate

ans: c

4) Choose the CORRECT match?

- a. Seminal vesicle ///// lined with stratified columnar epithelium
- b. Transitional prostatic acini ///// site of prostatic cancer
- c. Stereocilia ///// principle cells in epididymis

d. Secondary spermatocytes ///// undergo metamorphosis

e. Capacitation ///// secretion of acrosomal enzymes

ans: c

5) Which one of the following is the CORRECT statement?

a. Secondary spermatocyte contains diploid number of chromosomes

b. The mitochondrial sheath is present in the neck of the spermatozoa

c. Motile cilia are seen in the epididymis lining

d. Spermatids are found in the adluminal compartment of the seminiferous tubules

e. Main (peripheral) prostatic acini are the site of benign prostatic hyperplasia

ans: d

Female genital system

1) Which one is the CORRECT match?

a. Ovarian cortical stroma ///// source of theca folliculi cells

b. Granulosa lutein cells ///// secrete placental hormones

c. Oviduct epithelium ///// simple columnar mucus secreting

d. Endocervix ///// non-keratinized stratified squamous epithelium

e. Antrum ///// primary ovarian follicles

ans: a

2) Which of the following statements regarding the female reproduction is CORRECT?

a. The maternal part of the placenta is called decidua capsularis

b. The mucosa of the vagina contains mucous secreting glands

c. The spiral arteries supply the basal layer of the endometrium

d. The first meiotic division is completed just before ovulation

e. Primordial follicles contain primary oocytes with haploid number of chromosomes

ans: d

3) Ovulation is associated with sudden rise in?

a. prolactin

b. estrogen

c. LH

d. Oxytocin

e. Growth hormone

ans: c

4) Concerning the vagina, which statement is CORRECT?

a. Is lined by stratified columnar epithelium

b. Has a lamina propria and adventitia rich in elastic fibers

c. Its musculosa is formed of three layers

d. Has a lumen with an alkaline pH

e. Its lining epithelium secretes mucus

ans: b

5) Which one of the following is the FALSE statement?

a. The antrum starts to be seen in the secondary follicle

b. The second meiotic division is completed before ovulation

- c. Theca interna is responsible for secretion of estrogen hormone
- d. The fallopian tube ampulla is the site of fertilization
- e. The endometrium is lined by simple columnar partially ciliated epithelium

ans: b

Anatomy

Regarding the Ureter , one of the following statements is incorrect : Select one : a . ureter lies posterior to parietal peritoneum

- b . Crosses bifurcation of aortic artery
- c. lies anterior to sacro – iliac joint.
- d. lies on Lateral wall of pelvis towards ischial spine.
- E. Enter inferior surface of bladder at trigone

Ans: b

: All the following are posterior relation to the right kidney Except(2

- a.The diaphragm
- b . The 11th rib
- c . 12th rib
- d . The costodiaphragmatic recess of the pleura
- d . Quadratus lumborum

ans:b

: The muscle of the bladder wall is called . Select one (3

- . a . Detrusor muscle
- b . Dartos
- c . Trigon muscle
- d . Rugae .
- e . sphincter muscle

ans: a

? Rosette Shaped Kidney is formed due to(4

- a Fusion of the upper poles of both kidneys
- b . Fusion of the hilum of both kidneys
- c . Fusion of the lower poles of both kidneys
- d . Failure of ascending by inferior mesenteric artery
- e . Fusion of the lower and upper poles of both kidneys

ans: e

: All the following statements are true EXCEPT : Select one (5

- a . The false pelvis forms part of the abdominal cavity
- b . The pelvic outlet is diamond shaped
- c . The bony pelvis is composed by the two hip bones and the sacrum only
- d . The pelvic cavity lies between the inlet and the outlet
- e . The pelvic inlet synonym the pelvic brim

ans: c

All of the following statements are True related to the urethra of a male except : Select one (6
:

- a . The prostatic urethra It is about 1.25 inches long
- b . The membranous urethra is about 1.25 cm long
- c . The external meatus is the widest part of the entire urethra
- d . The part of the urethra that lies within the glans penis is dilated to form the fossa terminalis
- e . It is approximately 20 cm long in an adult

ans: c

7) The Male superficial perineal pouch contains which of the following structures ? Select one :

- a . Prostate

- b . Bulbourethral glands
- c . Membranous urethra
- d . Ischiocavernosus muscle
- e . Deep transverse perineal muscles

ans: d

All the following statements are true concerning the vagina EXCEPT ? Select one (8

- a.The cervix of the uterus pierces its posterior wall
- b . The lower half lies between the urethra anteriorly and the anal canal posteriorly
- c . It is directed upward and backward
- d . Its upper part is related to ureter
- e . Its posterior wall is longer than anterior wall

ans: a

: Which of the followings are incorrect regarding layers of the scrotum ? Select one(9

- a . External spermatic fascia
- . b . Cremasteric muscle
- C. Superficial fatty layer
- d. Internal spermatic fascia
- e.Involuntary dartos muscle

ans: c

? The normal anatomical Position of the uterus(10

- a . Anteverted anteflexed
- b . Anteverted
- c . Retroverted retroflexed
- d . Anteverted anteflexed
- e . Anteverted

ans: d

? The pelvic walls . Which is wrong(11

- a . The piriformis muscles..... Posterior wall
- .b. The obturator membrane Posterior wall
- c . Levatores ani muscles inferior wall
- d . The pubic rami Anterior wall
- e . The sacrotuberous and sacrospinous ligaments ... Lateral wall

ans: b

12)Select the false statement regarding the Vulva :

- a . Drained to Medial group of superficial inguinal nodes
- b . Mons Pubis hair - bearing elevation of skin found anterior to the pubis
- c . Labia Minora hair - bearing folds of soft skin
- d . Vestibule bounded laterally by the labia minora with the clitoris at its apex
- e.The glans of the clitoris is partly hidden by the prepuce

ans: c

? All of the followings are contents of the broad ligament of the uterus except(13

- a . Fallopian tube
- b . Paroophoron
- c . Ligament of the ovary
- d . Uterine vessels
- e . Ligaments of the uterus

ans :b

14)The promontory of the sacrum is formed by : Select one :

- a . Lower border of the anterior surface of the fifth sacral vertebra

- b . Anterior surface of the second sacral vertebra
- c . Lateral masses of the sacrum
- d . Anterior and upper border of the first sacral vertebra
- e . Lateral edge of the sacrum

ans: d

15) All of the followings are covering the spermatic cord except ? Select one :

- a . Cremasteric muscle
- b . Internal spermatic fascia
- c . External spermatic fascia
- d . Dartos muscle
- e . Cremasteric fascia

ans ; d

: Which one is true regarding the Vulva ? Select one(16

- a . The anterior ends of labia minora form the clitoris
- b . Orifices of the greater vestibular glands opens on each sides of urethra
- c . The vestibule is bounded laterally by the labia majora
- d . The clitoris is an erectile tissue of bulbus spongiosus
- e . The labia majora is covered by skin

ans: e

Due to the asymmetry of the body , the two kidneys have different anatomical relations . (17
Which of the following structures does only one of the kidneys articulate with on its respective
: side ? Select one

- . a . Diaphragm
- . b . Rib 11
- . c . Psoas major
- . d . Quadratus lumborum
- e . Transversus abdominis

ans: b

: All the following statements are true regarding the male perineum EXCEPT ? Select one(18

- a . Ischiocavernosus muscle assist in the process of erection of the penis
- b . Sphincter urethrae muscle surrounds urethra in the deep perineal pouch
- bulb of penis situated in the midline the urogenital diaphragm c . The
- d . The corpora cavernosa are supplied by the dorsal artery of the penis
- e. The skin of the penis is drained into the superficial inguinal

ans: d

Regarding the female urethra , the following statements are INCORRECT , EXCEPT : Select (19
: one

- . a . Is about 1.5 cm long
- . b . It extends from the neck of the bladder to the external meatus
- . c . It opens into the vestibule about 1cm below the clitoris
- . d . It lies immediately dorsal to the vagina
- . e . The ducts of the paraurethral glands at the sides of the neck of bladder

ans: b

20) An the following statements are true regarding the ovary EXCEPT ? Select one :

- a. It is attached to the broad ligament by the mesovarium
- b. The suspensory ligament of the ovary pass through the inguinal canal
- c . It is primary female genital organs
- d . Its blood supply arises from the abdominal aorta
- e . The ovarian vein drains into the inferior vena cava on the right side

ans: b

21) the horseshoe kidney the isthmus is tethered by the : Select one :

- a . Superior mesenteric artery
- b . Inferior mesenteric artery
- C. Renal artery
- d . Common iliac artery
- e . Internal iliac artery

ans: b

: Select the true statement regarding the urinary bladder in male (22)

- a . The neck of the bladder is held in position by the pubovesical ligaments
- b . The lower part of the posterior surface of the bladder related to the rectovesical pouch
- c . The muscular coat of the bladder is composed of smooth muscle called dartos muscle
- d . The sphincter vesicae found in the neck of the bladder
- e . The mucous membrane of trigon is thrown into folds in empty bladder

ans: d

: The Deep Perineal pouch in the Male Contain the following Except (23)

- a . Muscle by which micturition involuntarily stopped
- b . Bulbourethral Glands
- c- Deep Transverse Perineal Muscles
- Pudental Artery d . Intemai
- e . Dorsal Nerve of the Penis

ans: a

Embryology

1) Trigone of urinary bladder is developed from?

- a. Mesonephric duct
- b. Cloaca
- c. Pronephric duct

- d. Urachus
- e. Metanephric duct

ans: a

2) All of the followings are types of hypospadias except?

- a. Glandular hypospadias
- b. Hypospadias with ectopia vesica
- c. Scrotal hypospadias
- d. Penile hypospadias
- e. Complete hypospadias

ans: b

3) The pronephric kidney is developed from?

- a. Cranial part of intermediate mesoderm
- b. Caudal part middle mesoderm
- c. Middle part intermediate mesoderm
- d. Cranial part of middle mesoderm
- e. Caudal part of intermediate mesoderm

ans: a

4) Failure of obliteration of the urachus leading to?

- a. Urachal cyst
- b. Urachal diverticulum
- c. Urachal fistula
- d. Median umbilical ligament
- e. Urachal sinus

ans: c

5) What are the main cause of the epispadias?

- a. Failure in fusion of the genital groove
- b. Genital tubercle is caudal to the urogenital membrane
- c. Failure of the formation of the genital tubercle
- d. Failure in fusion of the urethral groove

e. Genital tubercle is cranial to the urogenital membrane

ans: d

6)) Rosette Shaped Kidney is formed due to?

- a- Fusion of the upper poles of both kidneys
- b. Fusion of the hilum of both kidneys
- c. Fusion of the lower poles of both kidneys
- d. Failure of ascending by inferior mesenteric artery
- e. Fusion of the lower and upper poles of both kidneys

ans: e

7) The proximal parts of the allantois gives?

- a. Truncus of the urinary bladder
- b. Apex of the urinary bladder
- c. Membranous urethra
- d. Most of the urinary bladder
- e. Penile urethra

ans: b

8) The mesonephric duct gives all of the followings in male except?

- a. Epididymis
- b. Seminal vesicle
- c. Paradidymis
- d. Ejaculatory duct
- e. Vas deferens

ans: c

9) Failure of urorectal septum in the male leading to?

- a. Urachal fistula
- b. Vesicovaginal fistula
- c. Anal fistula
- d. Rectovesical fistula
- e. Vaginal fistula

ans: d

10) Gartner's cyst in vaginal wall is developed from?

- a. Cranial part of the uterovaginal canal
- b. Metanephric duct
- C. Definitive urogenital sinus
- d. Mesonephric duct
- e. Caudal part of the uterovaginal canal

ans: d

وفقكم الله جميعاً

- صفاء مطر

- ملاك عبدالله

- أنسام الزبيدي

-براءة القضاة

-بشرى البشايرة