MCQ team

المذكرة تشمل على :

نماذج اسئلة قديمة لكل مادة

+

بعض الاسئلة نزولها دكاترة ودكتورات الهواد لهذا العام

((الاسئلة شاااملة لكل البلوك سوا ميد أو فاينل))

ملاحظة : الاجوبة الموجودة على بعض الاسئلة هي اجوبة دفعات اللي قبلنا اللي عملوا الاسئلة =)

و**بلييز** لاحد يجيبها معه بالجامعة أو يسال اعضاء هيئة تدريس عن احد هذه الأسئلة.

يارب تعجبكم وتفيدكم

☺دعواتكم

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[MCQ TEAM]

> Renal ANATOMY

MCQ

٤٢٩

Answers are reviewed with doctor

Dr. Jamila Qs.

1.Regarding the urinary bladder of female (select the incorrect answer):

— a. Lies at a lower level than in the male pelvis.

— b. Its neck is held in position by the pubovesical ligaments.

— C. has arterial supply from the superior and inferior vesical arteries.

— d. separated from the rectum by the vagina.

—

2. Regarding the prostatic urethra (select the true answer):

— a. It is the narrowest part of the male urethra.

— b. It receives the openings of ejaculatory ducts.

— C. It is surrounded by the external urethral sphincter.

d. It is the least dilatable portion of the entire urethra

—

3. Regarding the ureter (select the incorrect answer):

— A. It descends in front of the bodies of the lumbar vertebrae.

— B. It enters the pelvis in front of the sacroiliac joint.

— C. It is constricted at the pelviureteric junction.

— D. Has an arterial supply from the gonadal arteries.

—

4. The peritoneum intervenes between which one of the following structures and the anterior surface of the right kidney:

— A. Duodenum.

— B. Small intestine.

— C. Suprarenal gland.

— D. Colon.

—

5. which one of the following arteries is posterior to the right ureter:

— A. Gonadal.

— b. Common iliac.

— C. Ileocolic.

— D. Right colic.

—

6. The following structures are posterior to the left kidney (select the incorrect answer) :

— A. Last four ribs.

— b. Psoas major.

— C. Subcostal nerve.

— D. Quadratus lumborum.

7. Regarding the female urethra, select the incorrect answer:

— A. It predisposes to ascending infection.

— B. It is sensitive to pain.

— C. It opens behind the vaginal orifice.

— D. It opens in the vestibule below the clitoris.

8. The kidneys are held in position by (select the untrue answer) :

— A. Fibrous capsule.

— b. Perirenal fat.

— C. Renal fascia.

— D. Pararenal fat.

9.The afferent glomerular arteries arise from which one of the following arteries (select the true answer):

— A. Lobar.

— B. Interlobular.

— C. Arcuate.

— D. Interlobar.

10. Regarding the male urethra (select the incorrect answer) :

— a. The membranous part is the least dilatable portion.

— B. The bulbourethral glands open in the penile portion.

— C. The prostatic urethra passes through the urogenital diaphragm.

— D. It extends from the neck of the bladder to the external meatus on the glans penis.

///

Old QS

KIDNEY

The kidneys extend between the vertebral levels

A. Tl1-L2
B. T11-L3
C. T12-L2
D. LI-L3

Select the INCORRECT statement about the kidneys.

A. They lie behind the peritoneal cavity
B. Their upper poles are about 7.5 cm away from the midline
C. They become functional during the early period of intrauterine life
D. Their hila are crossed by the transpyloric plane (TPP)

***A* TRUE statement about the kidneys is**

A. They move with respiration
B. Their posterior relations are similar on both sides
C. They are structurally continuous with their respective suprarenal glands.
D. Their superior poles are superior to the 11 ' rib

The following muscles are related to the posterior surface of the kidney EXCEPT

A. Internal oblique muscle
B. Psoas major
C. Quadratus lumborum
D. Transversus abdominis
E. Diaphragm

Which of the following is NOT related to the posterior surface of kidney?

A. Sympathetic trunk
B. Subcostal nerve
C. Iliohypogastric nerve
D. flioinguinal nerve

Which of the following is placed most anteriorly in the renal pedicle?
A. Stem of renal artery
B. Branch of renal artery
C. Stem of renal vein
D. Renal pelvis

While exposing the kidney from behind, the last structure to be encountered in the posterior abdominal wall is
A. Latissimus dorsi
B. Anterior layer of the thoracolumbar fascia
C. Quadratus lumborum
D. Posterior layer of the thoracolumbar fascia

The following are related to the anterior surface of the left kidney EXCEPT
A. Body of the stomach
B. Body of the pancreas
C. Left crus of the diaphragm
D. Left colic flexure

Which of the following forms the third covering of the kidney?
A. Renalfascia
B. Perirenalfat
C. Pararenal fat
D. Fascia of Gerrota (fibrous capsule)

The number of vascular segments of the kidney is
A.3
B. 5
C.7
D.9

The renal angle lies between the erector spinae and the
A. 10rib
B. llthrib
C. 12Ih rib
D. Iliac crest

The minimum distance between the lower pole of the kidney and the summit of the iliac crest is about

A. 2.5 cm
B. 5cm
C. 7.5 cm
D. 10cm

In renal colic, the 'loin to groin' referred pain is mainly conveyed through the spinal segments

A. T9toTl2
B. T9toLI
C. TlltoL2
D. TlltoL4

The development of kidney begins in the

A. Thoracic region
B. Lumbar region
C. Thoracolumbar region
D. Sacral region

Qs in color seems like embryo =)

The secretory part of the kidney is developed from

A. Pronephros
B. Mesonephros
C. Metanephros
D. A&B

A horse-shoe kidney lies always below the origin of the

A. Coeliac tmnk
B. Superior mesenteric artery
C. Inferior mesenteric artery
D. Median sacral artery

Collection of fluid around the kidney (perirenal effusion) does not cross the midline due to the presence of

A. Fibrous capsule
B. Perirenalfat
C. Pararenal fat
D. Renal fascia

URETERS

The normal length of the ureter is about

A. 15cm
B. 20dm
C. 25cm
D. 30cm

The abdominal part of the ureter descends in front of the following EXCEPT

A. Psoas major
B. Genitofemoraj nerve
C. Tips of the transverse process of the lumbar vertebrae
D. Gonaclal vessels

The following structures are related to the left ureter EXCEPT

A. Sigmoid mesocolon
B. Gonadal vessels
C. Internal iliac artery
D. Transversus abdominis

Constrictions of the ureter are seen at the following sites EXCEPT

A. Pelvi-ureteric region
B. Brimoflesserpelvis
C. Bifurcation of the common iliac artery
D. Where it pierces the bladder

The ureter crosses the pelvic brim close to the

A. Sacral promontory
B. Pecten pubis
C. Sacroiliacjoint
D. Pubic symphysis

The ureter is related to the

A. Anterior vaginal fomix
B. Posterior vaginal fornix
C. Lateral vaginal fornix
D. B&C

Accidental ligation of the ureter during hysterectomy is due its close proximity with the

A. Fundus of the uterus
B. Bodyoftheuterus
C. Supravaginal portion of the cervix
D. Vaginal portion of the cervix

Which of the following is likely to produce kinking of the ureter?

A. Depletion of perinephric fat
B. Depletion of paranephric fat
C. Damage to the renal fascia
D. Damage to the renal capsule

Regarding the ureter all of the following are true, Except:
a. Both ureters have three anatomic constrictions.
b. Both ureters receive blood from the gonadal arteries.
c. Both ureters are separated from the transverse processes of lumbar vertebrae by psoas major muscle.
d. Both ureters pass anterior to the gonadal vessels.
e. Both ureters enter the pelvis anterior to the terminal part of the common iliac artery.

----> D (السبب : gonadal vessels are the most anterior ones in the abdominal viscera)

regarding to urinary bladder :

a. its base has NO peritoneum covering in both sexes

b. it is completely fixed within extrahepatic free tissue

c. both neck & apex are related to symphysis pubis

d. the superior surface receive the ureter

e. internal urethral sphincter cannot inhibit the parasympathetic activation

Answer is : C

regarding female ureters:

a-they run posterior to the bifurcation of common iliac arteries.

b-run anterior to the ovaries.

c-run forward and medially above the base of broad ligament.

d-run posterior to the internal iliac arteries.

e-are closed related to lateral fornix of the vagina.

/if the penile urethra rupture, the urine drain into all of these except:

a-penis.

b-superficial perineal pouch.

c-anterior abdominal wall.

d-skin of scrotum.

e-ischiorectal fossa

/regarding urinary bladder, which of the following is incorrect:

a-the seminal vesicles located at inferiolatral surface.

b-it's base rest at pelvic diaphragm.

c-pubovesical ligament attach pubis to the bladder.

d-related to the rectum anteriorly.

regarding the female pelvis, chose the incorrect:

a-is roomier than the male pelvis.

b-the sacrum is more curved.

c-the outlet is oval in transverse diameter.

d-ischial tuberosities are everted.

e-subpubic angle is wider.

according to the prostate, the incorrect is:

a-it's apex lies on the uroginetal diaphragm.

b-posterior lobe lies behind the urethra and above the ejaculatory ducts.

c-the prostati venues plexus lie between the capsule and prostatic sheath.

d-sympathetic nerve stimulate smooth muscle of the prostate.

e-puboprostatic ligament is condensation of pelvic fascia.

regarding the kidney, choose the wrong statement ;

a. each lobar arteries gives off 2 or3 interlobular arteries

b. malignant tumor of the kidney have a strong tendency to spread along renal vein

c. the afferent nerve fibers of the kidney enter the spinal cord at level of T12

d. renal colic is a signal for increasing kidney mobility

e.the renal artery arises from aorta at level of L2

Answer : a

. regarding the ureter:

A. has a relation with inferior vena cava

b. superior vesical artery supplies the ureter in the abdomen

c. its afferent fiber enter the spinal cord in 1^{st} &2^{nd} lumbar segments

d. lies anterior to testicular vessels

e. none is correct

Answer : C

///

Some Qs about genital parts, I don't think it is imp. But just in case If u found Q is related to urinary part.

. regarding to vas deferens,choose the worng statement :

a. inferior epigastric artery is related medially

b. ureter is related posteriorly

c. in its inferior end, it join the duct of seminal vesicle to form ejaculatory duct

d. it arise from posterior aspect of testis

e. it does not contact with peritoneum

ANs.: E

the seminal vesicle:

a. lies on superior surface of bladder

b. contact with peritoneum

c. related to rectovesical pouch

d. b& c answers

e. related to the neck of urinary bladder

ANs :D

regarding to the ejaculatory ducts, choose the wrong statement :

a. open into prostatic part of urethra

b. they close to prostatic utricle

c. pass posteroinferiorly through the prostate

d. pierce the posterior surface of protate

e. they drains seminal fluid to urethra

ANs: C

which of the followings statements is wrong about the prostate:

a. its venous plexus is in the outside of fibrous sheath

b. it is surrounded by pelvic fascia

c. is related to levator ani muscle

d. in case of enlargement of prostate, the urination may cause pain

e. it is separated from rectum by rectovesical septum

ANs: A

regarding the prostate choose the wrong statement:

a. the apex is continuous with neck of the bladder

b. the upper surface of the middle lobe is related to trigone of the bladder

c. we can see the posterior lobe in sagittal section

d. inferior hypogastric plexus supply it

e. the examination of prostate is by palpation of posterior surface

ANs : A

the prostate

a. does not contain glands

b. benign enlargement of median lobe of the prostate cause formation of a pouch of stagnant urine

c. in all operations of prostate, sever hemorrhage of the arteries can result

d. surrounds the 1st part of male urethra

e. surround the Membranous urethra

AnS : B

T oR F

Female urethra :

It's 1.5 in long = 4 cm T

Related posterioly to the utrovesical pouch F

It penetrates the sphincter uterthrae muscle T

Pass lateral to the lateral fornix of vagina T

Ureter:

Lies infront of psoas T

Constricted at the pelvic Ureter junction T

Bladder :

Supplied by vaginal artery T

Superior surface is covered with peritoneum in both sexes T

An area in the base is called trigone T

Fracture of pubic bone might injure the bladder T

its maximum capacity in adult 700 ml F (500 ml)

Vas deference :

Is crossed by Ureter in terminal part T

Unite with seminal vesicle to form ejaculatory duct T

Supplied by superior rectal artery F

Some Qs about genital parts, I don't think it is imp. But just in case If u found Q is related to urinary part.

Prostate :

The median lobe is located between ejaculatory duct and urethra T

Its base related to urinary bladder T

Its duct drain into membranous part of urethra F

Venous blood drain into internal iliac vein T

[MCQ TEAM]

> Renal Histology

MCQ

٤٢٩

The epithelial lining of urinary bladder is:

a. Stratified columnar
b. Pseudostratified columnar
c. Simple cuboidal
d. Transitional
e. Keratinized epithelium

Regarding the kidney:

A. Juxtramedullary nephron has a short lobe of henle.
B. Mesangeal cells are contractile.
C. Tunica intima of efferent arteriole secretes rennin.
D. Tunica media of efferent arteriole contact muscular densa.
E. Medullary rays in the medulla.

Transitional epithelium :

A. Is Stratified epithelium.
B. In the urinary bladder.
C. Has cilia.

Regarding the proximal convoluted tudules , choose the correct :

A. Longer than DCT.
B. Has no microvilli.
C. Basophilic
D. No basal lamina.

Regarding the renal corpuscle, choose the incorrect:

A. Fenestrated blood capillary with diaphragm.

Regarding the ureters , incorrect :

A. Serosa.
B. Inner longitudinal muscle.

Regarding glamerulus capillaries , choose the correct:

C. Stratified squamous epithelium.
D. Fenestrated blood capillary with diaphragm.
E. has basal lamina.

In the kidney, choose the correct:

A. loop of henle reach the renal papilla in Juxtramedullary nephron.

Kidneys are:

A. retroperitoneal structures.
B. Within the peritoneal cavity.
C. Endowed with a very rich blood supply.
D. Endowed with abundant C.T
E. Invested in a strong C.T capsule.

Regarding the urinary system and prostate all correct except:

A. Juxtraglomerular cells contain rennin granules .
B. Transitional zone of prostate is a common site for prostate carcinoma.
C. The basement membrane of the filtration barrier excludes the passage of large molecular weight protein.
D. The cell of macula densa are located in the distal convoluted tubules.

Regarding the urineferustubule all correct except:

A. It formed of nephrone and duct of bellini(collecting duct).
B. B.renal corpuscle are located in the cortexs.
C. (D.C.T) is lined with cuboidal epithelium.
D. d. (P.C.T) shares in formation of guxtaglomerular apparatus.
E. e. henle s loop extend into the medulla from within the medullary rays.

[MCQ TEAM]

> Renal Embryology

MCQ

٤٢٩

Answers are reviewed with doctor

DR JAMILA MCQ

1. Regarding the development of the urinary system (select the incorrect answer):

- A. It begins to develop after the genital system.
- B. It develops from the intermediate mesoderm.
- C. Starts to appear in the 4th week.
- D. The human embryo has three sets of kidneys.

2. Regarding the fetal kidney (select the incorrect answer):

- It attains the adult position by the 9th week.
- Nephron formation is incomplete at birth.
- It is subdivided into lobes.

The two kidneys lie close to each other ventral to the sacrum

3. The kidneys have the following features by the 9th week (select the untrue answer):

- A. The hilum is directed anteromedially.
- B. Glomerular filtration begins.
- C. The kidneys come into contact with the suprarenal glands.
- D. Functional maturation of the kidneys is completed.

4. The metanephric diverticulum gives rise to (select the correct answer):

- a. Renal corpuscles.
- B. Collecting tubules.
- C. Proximal convoluted tubules.
- D. Distal convoluted tubules

- **5. Regarding the development of the urinary bladder (choose the incorrect answer):**
- a. It develops mainly from the pelvic part of the urogenital sinus.
- B. The trigone is derived from the caudal ends of the mesonephric ducts.
- C. The urachus is represented in the adult by the medial umbilical ligament.
- D. The epithelium of the entire bladder is derived from the endoderm of the urogenital sinus.

- **6. Regarding the male urethra (select the incorrect answer):**
- A. Its distal part is derived from an ectodermal plate.
- B. The prostatic portion is derived from the pelvic part of the urogenital sinus.
- C. Its smooth muscle is derived from the splanchnic mesoderm.
- D. The epithelium of the entire urethra is derived from the endoderm of the urogenital sinus

- **7. Regarding the development of the metanephros (permanent kidney) select the incorrect answer :**
- A. Its primordia are of mesodermal origin.
- B. It appears early in the 5th week.
- C. The metanephric diverticulum is the primordium of the ureter.
- D. The metanephric mesoderm is an outgrowth from the caudal end of the mesonephric duct nerar its entry into the cloaca.

8. Regarding the pronephroi (select the incorrect answer):

- A. They are large, well developed and functioning organs.
- B. They are represented by few cell clusters and tortuous tubules.
- c. Most of the pronephric ducts persist.
- D. They are analogous to kidneys of primitive fishes.

- **9. Regarding the development of the urinary bladder (select the incorrect answer):**
- a. It develops mainly from the cranial part of the urogenital sinus.
- b. It enters the major pelvis at age of 6 years.
- c.The distal ends of the mesonephric ducts in males degenerate.
- d.The epithelium of the entire bladder is derived from the endoderm of the urogenital sinus.

- **10. Regarding the development of the kidney (select the incorrect answer):**
- A.Nephrons are derived from the metanephric mass of mesoderm.
- B. The increase of kidney size after birth results mainly from the increase of number of nephrons.
- C. The oblique entry of the ureters caused by traction of the ascending kidneys.
- D. The collecting system of the horse shoe kidney develops normally.

Old Qs

in infants the kidneys are found lobulated

- Urinary bladder lining by transnational ep

medulla of suprarenal gland is derived from:

- a-neural crest cells
- b-mesoderm
- c-endoderm
- d-ectoderm
- e-mesenchyme

All of the following arederivative of the neural crest cells, EXCEPT:

- a. Sensory ganglia.
- b. Autonomic ganglia.
- c. Schwann cells.
- d. Cells of suprarenal cortex.
- e. Meninges of the brain.

according to the renal system ,choose the in correct:

a-pronephrous is functioning kidney

according to the urinary bladder, choose the correct:

a-has dual origin of mesonephric duct and urogenital sinus

b-its epithelium derived from mesoderm

c-it derives entirely from urogenital sinus

d-allantois is not connected to it during development

testis pass in to the inguinal ligament in:

a-26 week

b-32 week

c-24 week

d-16 week

e-20 week

-All the following are derivatives of the endoderm, EXCEPT:

a- epithelium lining the respiratory tract
b- epithelium of the sweat glands
c- cell lining urinary bladder
d- epithelium lining the parathyroid gland
e- allantois

all of the following is derivative of uretic bud except:

a- ureter

b- renal pelvis

c- major calyx

d- collecting tubule

e- minor calyx

the answer is D

[MCQ TEAM]

> Renal pharmacology

MCQ

٤٢٩

Old Qs

- **Atropine is contraindicated in :**

a- Intestinal colics (F)

b- Glucoma (T)

c- prostatic hypertrophy (T)

d- constipation (T)

- **The main reason that sulfonamides have a selective action as antimicrobial drugs is:**

A) sterol synthesis is essential to microbial but not mammalian cells
B) bacterial cells do not contain dihydrofolate reductase
C) the drug sensitivities of dihydrofolate reductases of microbial and mammalian cells are different
D) mammalian cells lack dihydropteroate synthetase

- **Which of the following drug is a carbonic anhydrase inhibitor?**

a) Furosmide
b) Trimaterine\
c) Torozmide\
d) Dorzolamide

- **furosemide may cause:**

a- ototoxicity

-
- **the best diuretics that used to treat renal stone:**

a- acetazolamide
b- hydrochlorothiazide
c- spironolactone

- **the diuretics that used to treat metabolic alkalosis:**

a- acetazolamide

- **All of the following act by a similar mechanism, EXCEPT:**

A) tolbutamide
B) tolazamide
C) chlorpropamide
D) phenformin

Color means we aren't sure that Q with us

Which of the following in NOT an action of the beta-lactam antibiotics on bacteria?

A) inhibition of the cross – linking of peptidoglycan chains
B) binding to specific proteins in the cytoplasmic membrane
C) activation of autolytic enzymes
D) inhibition of peptidyl transferase

The main reason that sulfonamides have a selective action as antimicrobial drugs is:

E) sterol syntesis is essential to microbial but not mammalian cells
F) bacterial cells do not contain dihydrofolate reductase
G) the drug sensitivities of dihydrofolate reductases of microbial and mammalian cells are different
H) mammalian cells lack dihydropteroate synthetase

All of the following antimicrobial agents are inhibitors of protein synthesis, EXCEPT:

A) Clindamycin
B) Tetracycline
C) Vancomycin
D) Streptomycin

The mechanism of antibacterial action of cephalosporins involves

A) inhibition of peptide synthesis
B) interference with synthesis of ergosterol
C) inhibition of transpeptidase enzymes
D) inhibition of beta – lactamasis

The mechanism of antibacterial action of tetracyclines involves

A) inhibition of the conversion of lanosterol to ergosterol
B) inhibition of DNA – dependent RNA polymerase
C) blockade of binding of aminoacyl – RNA to bacterial ribosomes
D) selective inhibition of ribosomal peptidyltransferases

Appropriate statements about the clinical uses of tetracyclines include all of the following, EXCEPT:

A) the tetracyclines are drugs of choice in the treatment of rickettsial infections
B) Doxycycline is an effective prophylactic drug for Traveler's diarrhea
C) The tetracyclines are sutiable for the therapy of respiratory infections caused by Mycoplasma pneumoniae
D) High tissue penetration makes Minocycline an appropriate drug for the treatment of osteomyelitis due to methiclline – resistance staphylococci

All of the following statements about tetracyclines are accurate, EXCEPT:

A) they dross the placental barrier and are excreted in the milk of nursing mothers
B) suppression of the normal flora by tetracuclines may lead to superinfections from C albicans or resistant bacteria
C) they are chelating aghents that bind to calcium in underdeveloped bone and teeth
D) clinical resistance is due to formation of enzymes that inactivate tetracyclines

All of the following statements about sulfonamides are accurate, EXCEPT:

A) they inhibit bacterial dihydropteroate synthetase
B) acute hemolysis may occur in patients with glycose-6-phosphate dehydtogenase deficiency
C) they are antimetabolites of PABA
D) crystalluria is most likely to occur at high urinary Ph

All of the following statements about the clinical uses of sulfonamides are accurate, EXCEPT:

A) sulfadiaxine is effective in acute urinary tract infections due to nonresistant E coli
B) topical Sulfacetamide is useful for chlalmydial infection of the eye
C) sulfamethoxazole is effective in Rocky Mountain spotted fever in patients allergic to tetracyclines
D) sulfisoxazole is not likely to be effective for chronic prostatitis in an elderly patient

All of the following adverse effects occur with sulfonamide therapy, EXCETP:

A) increased anticoagulant effects if given with coumarins
B) Fanconi's aminoaciduria syndrome
C) Urticaria
D) Kernicterus in the newborn

The mechanisms involved in the development of clinical resistance to sulfonamides include all of the following, EXCEPT:

A) decreased intracellular accumulation of drug
B) changed sensitivity of dihydrofolate reductase
C) increased production of PABA
D) utilization of extracellular sources of folic acid

All of the following statements about the combination of trimethoprim plus sulfamethxazole are accurate, EXCEPT:

A) it is effective in the treatment of pneumonia due to Pneumocystis carinii
B) the drugs produce a sequential blockade of folic acid synthesis
C) fever and pancytopenia occur frequently in AIDS patients

Choose the ONE best answer.

22.1 An elderly patient with a history of heart disease and who is having difficulty breathing is brought into the emergency room. Examination reveals that she has pulmonary edema. Which of the following treatments is indicated?

A. Spironolactone
B. Furosemide
C. Acetazolamide
D. Chlorthalidone
E. Hydrochlorothiazide

22.2 A group of college students is planning a mountain climbing trip to the Andes. Which of the following drugs would be appropriate for them to take to prevent mountain sickness?

A. A thiazide diuretic
B. An anti-cholinergic
C. A carbonic anhydrase inhibitor
D. A loop diuretic
E. A β-blocker

22.3 An alcoholic male has developed hepatic cirrhosis. In order to control the ascites and edema, he is prescribed which one of the following?

A. Hydrochlorothiazide
B. Acetazolamide
C. Spironolactone
D. Furosemide
E. Chlorthalidone

2.4 A 55-year-old male with kidney stones has been placed on a diuretic to decrease calcium excretion. However, after a few weeks, he develops an attack of gout. Which diuretic was he taking?

A. Furosemide
B. Hydrochlorothiazide
C. Spironolactone
D. Triamterene

2.5 An 75-year-old woman with hypertension is being treated with a thiazide. Her blood pressure responds and reads at 120/76 mm Hg. After several months on the medication, she complains of being tired and weak. An analysis of the blood indicates low values for which of the following ?

A. Calcium
B. Uric acid
C. Potassium
D. Sodium
E. Glucose

1. A 70-year-old man is admitted with a history of heart failure and an acute left ventricular myocardial infarction. He has severe pulmonary edema. Which of the following drugs is LEAST likely to prove useful in the treatment of acute pulmonary edema?
   (A) Bumetanide
   (B) Ethacrynic acid
   (C) Furosemide
   (D) Hydrochlorothiazide
   (E) Torsemide
2. A 50-year-old man has a history of frequent episodes of renal colic with high-calcium renal stones. The most useful agent in the treatment of recurrent calcium stones is
   (A) Mannitol
   (B) Furosemide
   (C) Spironolactone
   (D) Hydrochlorothiazide
   (E) Acetazolamide
3. When used chronically to treat hypertension, thiazide diuretics have all of the following properties or effects EXCEPT
   (A) Reduce blood volume or vascular resistance, or both
   (B) Have maximal effects on blood pressure at doses below the maximal diuretic dose
   (C) May cause an elevation of plasma uric acid and triglyceride levels
   (D) Decrease the urinary excretion of calcium
   (E) Cause ototoxicity
4. Which of the following drugs is correctly associated with its site of action and maximal diuretic efficacy?
   (A) Thiazides—distal convoluted tubule—10% of filtered Na^+
   (B) Spironolactone—proximal convoluted tubule—40%
   (C) Bumetanide—thick ascending limb—15%
   (D) Metolazone—collecting tubule—2%
   (E) All of the above
5. A patient with long-standing diabetic renal disease and hyperkalemia and recent-onset congestive heart failure requires a diuretic. Which of the following agents would be LEAST harmful in a patient with severe hyperkalemia?
   (A) Amiloride
   (B) Hydrochlorothiazide
   (C) Losartan
   (D) Spironolactone
   (E) Triamterene
6. Which of the following diuretics would be most useful in a patient with cerebral edema?
   (A) Acetazolamide
   (B) Amiloride
   (C) Ethacrynic acid
   (D) Furosemide
   (E) Mannitol
7. Which of the following is not a complication of therapy with thiazide diuretics?
   (A) Hypercalciuria
   (B) Hyponatremia
   (C) Hypokalemia
   (D) Hyperuricemia
   (E) Metabolic alkalosis
8. Which of the following therapies would be most useful in the management of severe hypercalcemia?
   (A) Amiloride plus saline infusion
   (B) Furosemide plus saline infusion
   (C) Hydrochlorothiazide plus saline infusion
   (D) Mannitol plus saline infusion
   (E) Spironolactone plus saline infusion
9. A 60-year-old patient complains of paresthesias and occasional nausea associated with one of her drugs. She is found to have hyperchloremic metabolic acidosis. She is probably taking

(A) Acetazolamide for glaucoma
(B) Amiloride for edema associated with aldosteronism
(C) Furosemide for severe hypertension and congestive failure
(D) Hydrochlorothiazide for hypertension
(E) Mannitol for cerebral edema

10. A 70-year-old woman is admitted to the emergency room because of a "fainting spell" at home. She appears to have suffered no trauma from her fall, but her blood pressure is 110/60 when lying down and 60/40 when she sits up. Neurologic examination and an ECG are within normal limits when she is lying down. Questioning reveals that she has recently started taking "water pills" (diuretics) for a heart condition. Which of the following drugs is the most likely cause of her fainting spell?
(A) Acetazolamide
(B) Amiloride
(C) Furosemide
(D) Hydrochlorothiazide
(E) Spironolactone

11. A 55-year-old patient with severe post-hepatitis cirrhosis is started on a diuretic for another condition. Two days later he is found in a coma. The drug most likely to cause coma in a patient with cirrhosis is
(A) Acetazolamide
(B) Amiloride
(C) Furosemide
(D) Hydrochlorothiazide
(E) Spironolactone

12. A drug that has its major effect in the distal convoluted tubule is
(A) Acetazolamide
(B) Amiloride
(C) Demeclocycline
(D) Desmopressin
(E) Ethacrynic acid
(F) Furosemide
(G) Metolazone
(H) Mannitol
(I) Spironolactone
(J) Triamterene

13. A drug that increases the formation of dilute urine in water-loaded subjects and is used to treat SIADH is
(A) Acetazolamide
(B) Amiloride
(C) Demeclocycline
(D) Desmopressin
(E) Ethacrynic acid
(F) Furosemide
(G) Metolazone
(H) Mannitol
(I) Spironolactone
(J) Triamterene

14. A drug that is useful in glaucoma and high-altitude sickness is
(A) Acetazolamide
(B) Amiloride
(C) Demeclocycline
(D) Desmopressin
(E) Ethacrynic acid
(F) Furosemide
(G) Metolazone
(H) Mannitol
(I) Spironolactone
(J) Triamterene

Qs From lippincott

22.1 An elderly patient with a history of heart disease and who is having difficulty breathing is brought into the emergency room. Examination reveals that she has pulmonary edema. Which of the following treatments is indicated?

A. Spironolactone.

B. Furosemide.

C. Acetazolamide.

D. Chlorthalidone.

E. Hydrochlorothiazide.

View Answer

22.2 A group of college students is planning a mountain climbing trip to the Andes. Which of the following drugs would be appropriate for them to take to prevent mountain sickness?

A. A thiazide diuretic.

B. An anticholinergic.

C. A carbonic anhydrase inhibitor.

D. A loop diuretic.

E. A Î²-blocker.

View Answer

22.3 An alcoholic male has developed hepatic cirrhosis. To control the ascites and edema, he is prescribed which one of the following?

A. Hydrochlorothiazide.

B. Acetazolamide.

C. Spironolactone.

D. Furosemide.

E. Chlorthalidone.

View Answer

22.4 A 55-year-old male with kidney stones has been placed on a diuretic to decrease calcium excretion. However, after a few weeks, he develops an attack of gout. Which diuretic was he taking?

A. Furosemide.

B. Hydrochlorothiazide.

C. Spironolactone.

D. Triamterene.

22.5 A 75-year-old woman with hypertension is being treated with a thiazide. Her blood pressure responds and reads at 120/76 mm Hg. After several months on the medication, she complains of being tired and weak. An analysis of the blood indicates low values for which of the following ?

A. Calcium.

B. Uric acid.

C. Potassium.

D. Sodium.

E. Glucose

22.6 Which of the following drugs is contraindicated in a patient with hyperkalemia?

A. Acetazolamide

B. Chlorothiazide

C. Ethacrynic acid

D. Chlorthalidone

E. Spironolactone

22.7 Which would be the initial treatment choice to manage the hypertension in an African-American woman with a past medical history of gout and severe hypokalemia?

A. Hydrochlorothiazide

B. Spironolactone

C. alsartan

D. Atenolol

E. Enalapril

MCQS TEAM 429

> Renal physiology

MCQs

429

- **Which of the following pressures favours filtration in the glomerus?**

A-glomerules hydrostatic pressure

B-glomeur colloid osmotic pressure

C-arterial colloid osmotic pressure

D-capsular hydrostatic pressure

- **Which if the following will decrease GFR?**

A-relaxation of glomerluar mesegial cells (relaxation of the mesengial cells increase blood flow - will increase the GFR , contraction decrease blood flow - decrease GFR)

B-prolonged urethral obstruction (disease will decrease the GFR)

c- Decrease glomerular colloid osmotic pressure

d- High blood pressure

- **Inulin clearance is equal to**

A-renal plasma flow

B-urea clearance

C-GFR

D-Glucose clearance

- **The renal epithelial cells reabsorb Na from the basolaterl membrane via:**

A-Na/K ATPase pump

B-Na/H counter –transport

C-Na/Glucose co-transport

D-Na-Cl co-transport

- **Regarding the reabsorption of water :**

A-. 45% is reabsorbed in the PCT only if ADH is present

B- 20% is reabsorbed in the descending limb of loop of Henle

C-. 15% is reabsorbed in the thick ascending limb of loop of Henle

D- no water is reabsorbed in the collecting duct if ADH is present

- **regarding glucose**

A-. all filtered glucose will appear in urine

B- the tubular maximum for glucose (Tm is 475mg/ min)

c. all glucose is completely reabsorbed in the PCT

D-. Glucose is reabsorbed through K+-glucose co-transport

- **how will the lung compensate in the metabolic alkalosis ?**
    A. ventilation will go up
    B. there will be no change
    C. apnea will occur
    D. ventilation will go down

if the there is acid-base disturbance, which of the following is the slowest respond

A-. lungs

B- intra cellular proteins

C-. kidneys

D-. muscles

- **if the clearance of a freely filtered substance is less than that of Inulin**
- A-. there is some reabsorption of that substance in the tubules

- B-. there is some secretion of that substance into the tubules
- C- the substance is neither reabsorbed nor secreted
- D- the substance is totally excreted in the urine

- **34-Which one of the following will increase GFR:**
- A-increase renal blood flow
- B-concentration of afferent arteriol
- C-increase in glomerular pressure.
- D-Increase in bowman's hydrostatic pressure.
- E-Decrease blood flow.

- **35-The osmolality will reach in the PCT:**
- A-300.
- B-100.
- C-1200.
- D-200.
- E-1000

- **36-carection of acidosis:-**
- A-decrease renal absorption of HCO3.

- **37-micturation reflex :-**
- A-sacral segemant injury .
- B-lumbar segment .
- C-begin with sympathetic activation .

- **38-water reabsorption :-**
- A-maintain hyperosmolar urine .

- **39- Filtration fracion is**
- GFR/RPF

- RPF/GFR
- GFR × P

- **40-Which one will increase GFR**
- increase RPF

- **41-Acid base:**
- A-strong acid
- B-weak acids accept H+
- C-weak acid and completely dissociated
- D-strong alkali donate H+
- E-pH= - log[H+]

- **45-According to concentrated urine,true**
- A-dehydration (low ECF) hyperosmolar urine
- B-vasa recta perform caunter current multiplayer
- C-inhibition of Na,Cl reabsorption kead to water retination

- **46-Inulin clearance is equal to:**
- A-GFR

- **47-Collecting duct:**
- A-Secrete K , Absorb Na
- B-Freely reabsorb NA
- C-Reabsorb Glucose
- D-Reabsorb AA
- E-Water
- F-Phosphate

- **48-Renal compensate for acidosis in...**
- A-When Compensate PH return to normal
- B-he has Diarhea
- C-Hyperventilation
- D-Uncontrolled Diabetes

- E-All of the above are correct

- **49-One of the following concerned with filteration:**
- A-Change of the molecule
- B-Lipid solubility
- C-Water solubility

- **50-One of the following favore filtration:**
- a-PG
- b-Π G
- c-PB
- d-Π B

- **51-Renine:**
- a-↑ reabsorbtion of Na.
- b-convert angiotensin.
- c-Reabsorb Na & K

- **52. The _____ is responsible for 65% of Na+ uptake from the nephron.**
- glomerulus
- proximal convoluted tubule
- Loop of Henle
- distal convoluted tubule
- collecting duct

- **53. Osmolarity is**
- the same as osmotic pressure
- the number of dissolved solute particles per 1000 ml water
- the number of dissolved particles in 100 ml of water
- the same as hypertonic
- the formula weight of a compound in 1 liter of water

- **54. The renin -angiotensin pathway is largely responsible for:**
- decreasing blood pressure in conjunction with ANP

- increasing blood pressure in conjunction with aldosterone
- passing kidney stones
- stimulating the hypothalamus to secret ADH

- **55. What is most likely excreted in the urine when someone drinks a six pack of coke a day?**
- bicarbonate ion
- hydrogen ion
- ammonia
- bilirubin

- **56. What quantity of urine is considered a normal output?**
- 500ml
- 1-2 liters
- 50-75 liters
- D-. 180 liters

- **57. Insoluble crystals of salts in the urine are**
- normal kidney functions
- kidney stones
- easy to pass
- a sign of good diet

- **58. What is the salt concentration of plasma?**
- the same as the cells
- the same as urine
- the same as in the glomerular filtrate
- a and c e. a and b

- **59- The major physical difference between a cortical nephron and a juxtamedullary one is:**
- the glomerulus of one is in the cortex and the other is in the medulla
- the cortical nephron has a very long loop of Henle, the other has a short one
- the juxtamedullary nephron has a very long loop of Henle, the other has a short one
- the cortical nephron has a much larger glomerulus

- **60. The renal capsule and the renal corpuscle differ in that the :**
- capsule is connective tissue and the corpuscle is part of the nephron
- they are the same thing
- corpuscle surrounds the kidney and the capsule immediately surrounds the glomerulus

- **61. Which sequence is correct?**
- renal artery, interlobular artery, arcuate artery
- interlobular artery, efferent artery, afferent artery
- interlobular artery, efferent artery, vasa recta
- interlobar artery, peritubular capillaries, glomerulus

- **62. Which sequence is correct:**
- Bowman's capsule, distal convoluted tubule, proximal convoluted tubule
- proximal convoluted tubule, collecting duct, Bowman's capsule
- glomerulus, proximal convoluted tubule, minor calyx
- glomerulus, proximal convoluted tubule, Bowman's capsular space, renal pelvis

- **63- By which process is most material filtered in the glomerulus?**
- diffusion
- osmosis
- c. pressure differences
- ATP pumps

64. What prevents all the components of the blood from being filtered into Bowman's capsule?

- charge
- lipid solubility
- C-. size
- water solubility

65. Which hormone is directly responsible for an increasing Na+ uptake from the filtrate in the collecting duct?

- ADH
- aldosterone
- rennin

Which one of the following indicators is used to measure the volume of total body water?

A. Thiosulfate.
B. Evan's blue dye.
C. Deuterium oxide (heavy water).
D. Radioactive chromium.
E. Inulin.

. Shrinking of red blood cells volume occurs when it is placed in:

A. 9% NaCl solution.
B. Hypotonic saline.
C. Isotonic saline.
D. 25% glucose solution.
E. Both A and D.

1. In order to measure the total blood volume, the indicator is

a. Heavy water (deuterium).
b. Inuline.
c. Evan blue Dye (T1842)

E- All are correct

1- regarding the kidney

A- getting a urine sample can tell us if a person has leukemia
B- during proteins digestion experiments we measure amino acids in urine
C- Epinephrine & Nor epinephrine play apart in controlling GFR
D- AngiotesinII decrease GFR and plays the same role as sympathetic
E- none is correct

2- Choose the incorrect statement

A- GFR between 30mmHg-40mmHg is normal
B- A person with hypernatremia (Na) will exeret more albumin in urine due to increase (+) charge is bowman's capsule
C- Each kidney is 150g in average
D- A and B
E- none is correct

3- Choose the incorrect statement

A- very Rich protein diet will be reflected in increase amino acid in urine
B- Dehydration will have no effect on filtration
C- Closing of Na-K-2Cl channels will increase water execrated
D- Increase contraction of efferent arterioles will increase filtration and absorption
E- all are correct

4- Regarding GFR the minimal force that control it is

A- PG
B- PB
C- πG
D- πB
E- None is correct

Q	1	2	3	4
A	C	D	B	D

5- regarding functional anatomy of the kidney

A- Juxtamedullary is found in the Cortex
B- The Deseeding loop of Henle is thick
C- The renal pyramids contain collecting tube
D- None is correct
E- B and C are correct

6- regarding renal PSL

A- The afferent and efferent arterioles can control filtration and reabsorbtion
B- With aging, Urine gets more concentrated due to increase juxtamedullary
C- Input of 100mg of glucose = output of 60mg
D- All inulin is reabsorbed
E- None is correct

7- chooses the incorrect statement about the kidney

A- The kidney regulate water balance
B- The kidney regulate PH
C- Excreted waste products
D- Glucongenesis
E- Gets 50% of CO

8- choose the correct statment about Filtration fraction

A- Increase PG will increase it
B- Decrease PB will increase it
C- Decease πB will increase it
D- A and B
E- B and C

Q	5	6	7	8
A	C	A	E	D

9- Regarding the GFR and RBF

Prostaglandins and bradykinin are vasoconstriction effects
AngiotensinII increase both GFR and RBF
Epi & Nor-epi decrease RBF and GFR
Decrease GFR will decrease reabsorbtion overall
None is correct

10- choose the correct statement:

A- Decrease Afferent arteriolar resistance will decrease PG
B- Increase Afferent arteriolar resistance will increase PG
C- Decrease Efferent arteriolar resistance will increase PG
D- Increase Efferent arteriolar resistance will increase PG
E- Afferent and efferent arterioles will have no effect on PG

11- regarding GFR

A- A person with chronic hypertension will have more filtration
B- Permeability will increase with hypertension
C- Kf will be reduced due to increase permipallety
D- Increase Bowman's capsule pressure will increase Kf
E- None is correct

12- the following decrease GFR except

A- Epi-nephrein
B- Nor-epinephrine
C- Prostaglandin
D- Endothelien
E- All increase GFR

Q	9	10	11	12
A	D	D	E	C

13- which of the following increase Urine output

Increase ADH
Increase Pc
Increase πc
Increase Pif
E- decreased πif

14- regarding the tubular reabsorbtion chooses the correct

A- Glucose and Amino acid are reabsorbed in DT
B- Hco3 can be reabsorbed nearly through all parts of the tubule
C- Cl is secreted through Transcellular transport
D- ADH deacrease water permeability
E- All are correct

15- which one of the following factors decrease reabsortion

A- Decrease ADH
B- Increase ANP
C- Decrease Aldostron
D- Decrease ATII
E- All are correct

16-regarding substance " B "

A- If clearance (B) = 125ml/min it is filtered, absorbed and secreted
B- If clearance (B)= 140ml/min it is filtered and secreted
C- If clearance (B)= 90ml/min it is filtered and secreted
D- If clearance (B)= 125ml/min it is not filtered
E- All are none correct

Q	13	14	15	16
A	B	B	E	B

17- PAH is measured

A- GFR
B- RPF
C- Tubular absorbtion
D- Urine out put
E- None of above
+ +

18- K and H concentration is regulatedThrough

A- Secretion
B- Absorbtion
C- Increase parathyroid
D- A and C
E- All are none correct

19-which of the following substances doesn't have Tmax

A- Glousce
B- Amino acid
C- Water
D- A and B
E- All have Tmax

20- substance that doesn't have T max are depended on

The electrochemical gradient
Membrane permeability
Tubular flow rate
A and C only
A, B and C

Q	17	18	19	20
A	B	A	C	E

21- regarding Acid-base balance

A- The kidney can regulate it
B- The lung can regulate it
C- Body fluids can regulate it
D- PH=5 is normal
E- All are correct

22- regarding a person with respiratory acidosis

A- He will hyperventilate
B- Pco2 will increase
C- PH will decrease
D- Kidneys will secret H
E- All are correct

23- which one of the following work inside the cell

A- Protein system
B- Bicarbonate system
C- Phosphate system
D- All work inside the cell
E- None of above

24- loose of Hco3 will lead to

A- Metabolic alkalosis
B- Metabolic acidosis
C- Respiratory acidosis
D- Respiratory alkalosis

Q	21	22	23	24
A	D	A	C	B

T OR F

- 1-Kidney regulate extracellular osmolarity (T)
- 2-Juxta medullary nephron comprises the majorty of nephron (F)
- 3- Cortical nephrons are located deep in the medulla (F)
- 4- Vas recta are the blood supply of the juxtamedullary nephron (T)
- 5- Glomerular capillary hydrostatic pressure changes will affect GFR(T)
- 6- the negatively charged molecule is the fastest to be filtered (F)
- 7-. the filtrated fluid at the end of the proximal convoluted tubule is iso-osmolar (T)
- 8- the filtrated fluid at the end of the proximal convoluted tubule has glucose concentration similar to that of plasma (F)
- 9- Sodium is actively reabsorbed from the basolateral membrane at the PCT (T)
- 10-the glomerular filtration rate is typically equal to 700 ml/min (F)
- 11-65% of the water filtered in the glomerulus is reabsorbed in the PCT (T)

- 12-the tubulo-glomerular mechanism is a negative feedback regulation filtration rate (T)

- 13-The hyper-osmotic is the filtrate in the thick loop of Henle is due to NaCl reabsorbtion (F)

- 14-The slow flow rate of the filtrate triggers the release of rennin (T)

- 15-Rennin secretion leads to hypovolima (low blood pressure) (F)

- 16-The transport maximum of glucose varies with the length of the times Glucose is present in the tubules (F)

- 17-The clearance of PAH is equal to GFR (F)

- 18-Collecting duct is permeable to urea in the presence of ADH (T)

- 19-An individual suffering from diabetes inspidius forms concentrated urine (F)

- 20-A counter current multipler mechanism is responsible for the maintenance of the hyperosmolar medulla (F)

- 21-Micturition reflex id triggered when urine volume in the bladder reaches 30ml (F)

- 22-A healthy individual will pass a small amount of hyper concentrated urine with presence of ADH (T)

RENAL REVISION QUESTIONS

GFR (from DR.steLbanaT)

Put (T) for the true statement and (F) for the false statement below:

1. Kidney regulate extracellular osmolarity ( )
2. Juxta medullary nephron comprises the majorty of nephron ( )
3. Cortical nephrons are located deep in the medulla ( )
4. Vasa recta are the blood supply of cortical nephron ( )
5. Renin is secreted by JGA cells ( )
6. Cortical blood flow is equal to medullary blood flow ( )
7. Vasomotor activity of renal BV is regulated by parasympathetic NS ( )
8. Filtration membrane composed of 4 layers ( )
9. Endothelial layer is characterized by filtration slits ( )
10. Podocyte layer contain contractile mesengial cells ( )
11. The negatively charged molecule is the fastest to be filtered ( )
12. Positively charge molecule of 8nm size are easily filtered ( )
13. Drop in glomerular capillary hydrostatic pressure increases GFR ( )
14. Glomerular osmotic pressure favor filtration ( )
15. Drop in glomerular capillary hydrostatic pressure increases GFR ( )
16. Increase in bowman pressure is associated with renal stone ( )
17. Bowman capsule oncotic pressure is equal to 25mmHG ( )
18. Net filtration is equal to 60mmHG ( )
19. Filtration coefficient is the function of membrane surface area and permeability ( )

20. The glomerular filtration rate is typically equal to 700 ml/min ( )

21. Inulin and creatinine clearance are measure of GFR ( )

22. The clearance of PAH is equal to glomerular filtration rate (GFR) ( )

23. Filtration and absorption is the first step of urine formation ( )

SELF ASSESSMENT QUIZ

1. What is the minimum amount of water a day the kidneys are "obliged" to put out?

   A. 0 liters

   B. 0.5 liters

   C. 1.0 liters

   D. 3 liters

2. Which vitamin do the kidneys convert to its active form?

   A. Vit C

   B. Vit K

   C. Vit. D

   D. Vit.E

3. Which part of the kidney collects urine after it has been formed?

   A. the renal cortex

   B. the renal medulla

   C. the renal pyramid

   D. the renal pelvis

4. What channel transports urine from the kidneys to the bladder?

   A. the urethra

   B. the ureter

   C. the glomerulus

   D. the renal pyramid

5. Urine composition is further altered by the bladder.

   A.True

   B. False

6. What component of a nephron collects glomerular filtrate?

   A. Bowman's capsule

   B. the loop of Henle

   C. the distal tubule

   b. the juxtaglomerular apparatus

7. What percentage of the plasma that actually enters the glomerulus is filtered?

A. 10%

B. 20%

C. 80%

D. 90%

8. Once substances are filtered out by glomerular filtration they can't be recovered.

A. True

B. False

9. What are fenestrae?

A. flattened endothelial dells in the glomerular capillary walls

B. large pores in the glomerular capillary walls

C. large pores in the walls of the proximal tubule

b. glycoproteins sandwiched between the glomerulus and Bowman's capsule

10. What prevents 99% of albumin escaping into Bowman's capsule?

A. fenestrae

B. negatively charged glycoproteins

C. collagen

D. podocytes

11. Of the three forces involved in glomerular filtration, which "favors" rather than "opposes" filtration?

A. Bowman's capsule hydrostatic pressure

B. plasma-colloid osmotic pressure

C. glomerular capillary blood pressure

D. all of the above

12. What cells forming the walls of the distal tubule in the juxtaglomerular apparatus can detect changes in the rate at which fluid flows past them?

A. granular cells

B. podocytes

C. endothelial cells

D. macula densa

13. It has been suggested that release of the vasoactive chemical, bradykinin, can help return GFR to normal after it has declined.

A. True

B. B. False

14. What are mesangial cells?

A. cells that hold together glomerular capillaries and have the ability to contract and relax so as to alter the filtration coefficient

B. cells in the inner membrane of Bowman's capsules that can contract or relax and so alter the filtration coefficient

C. cells which can trigger the release of chemicals capable of inducing vasoconstriction

D. cells which can trigger the release of chemicals capable of inducing vasodilation

15. What blood vessels are involved in the re-absorption of materials that the body does not want to lose?

A. the efferent arterioles

B. the afferent arterioles

C. the peritubular capillaries

D. the proximal tubules

16. To be reabsorbed from the kidney tubules back into the blood, how many distinct barriers must a substance cross?

A. 2

B. 3

C. 8

D. 5

17. What percentage of filtered glucose is reabsorbed?

A. 100%

B. 99%

C. 10%

D. 50%

18. In what part of the nephron is sodium re-absorption an important aspect of the re-absorption of glucose and amino acids?

A. the loop of Henle

B. the distal tubule

C. the proximal tube

D. all of the above

19. The net transport of No" from the tubular lumen into the blood can be considered passive re-absorption.

    A. True

    B. False

20. In the renin-angiotensin-aldosterone system, where does the aldosterone originate?

    A. the liver

    B. the kidneys

    C. the lungs

    D. the adrenal cortex

21. What triggers the atria to release atrial natriuretic peptide?

    A. Na+ retention

    B. expansion of ECF volume

    C. increase in the arterial blood pressure

    D. all of the above

22. The co-transport of glucose and amino acids with Na+ from the tubular lumen to the tubular cells demands additional energy than that already used to transport the Na+.

    A. True

    B. False

23. Which is the only substance not to have a tubular maximum?

    A. Phosphate

    B. Glucos

    C. Na+

    D. amino acids

24. Under normal conditions, how high must the plasma glucose concentration be before glucose would start escaping in urine?

    A. over 100 mg/ml

    B. over 375 mg/ml

    C. over 300 mg/ml

    D. over 125 mg/ml

25. The point at which the plasma concentration of a particular substance is high enough to cause it to appear in the urine is called:

A. the tubular maximum

B. the renal threshold

C. the tubular threshold

D. the renal maximum

26. Which two substances can parathyroid hormone regulate the re-absorption of?

A. phosphate and calcium

B. calcium and chloride

C. calcium and urea

D. phosphate and chloride

27. What causes variable water re-absorption in the distal region of the nephron?

A. regulation of channels by parathyroid hormone

B. regulation by atrial natriuretic peptide

C. regulation by vasopressin

D. regulation by aldosterone

28. Which waste product can be passively reabsorbed back into the blood?

A. urea

B. creatinine

C. phenol

b. all of the above

29. Which process truly regulates K" content in the plasma?

A. glomerular filtration

B. Tubular re-absorption

C. Tubular secretion

D. all exert an equally regulatory influence

30. Increased acidity of body fluids leads to a reduction in K+ secretion.

A. True

B. False

31. Monitoring which substance can give the most accurate measure of *GPR?*

A. insulin

B. creatinine

C. para-aminohippuric acid

D. inulin

32. Which part of the juxtamedullary nephron establishes the vertical osmotic gradient?

A. the loop of Henle

B. the vasa recta

C. the collecting tubules

D. the proximal tubule

33. The presence of vasopressin causes the distal and collecting tubules to become permeable to water.

A. True

B. False

34. What results form alcohol ingestion?

A. supression of vasopressin leading to water diuresis

B. elevation of vasopressin leading to water diuresis

C. suppression of vasopresssin leading to osmotic diuresis

D. elevation of vasopressin leading to osmotic diuresis

35. What is the maximum concentration of solutes in urine?

A. 500 mosm/liter

B. 800 mosm/liter

C. 1,200 mosm/liter

D. 1,500 mosm/liter

36. The distal portion of the tubule is highly permeable to urea.

A. True

B. False

37. In chronic renal failure, how much loss of kidney tissue can occur before loss of function becomes apparently

A. 25%

B. 40%

C. 75%

D. 90%

38. What aspect of renal failure can lead +o changes in cardiac and neural excitability?

A. uremic toxicity

B. potassium retention

C. metabolic acidosis

D. inability to vary urine concentration

39. Micturition is the voluntary control of +he bladder and urination.

A. True

B. False

من سماء النسيان &
نزلتها بيدو جزاهم
الله خير =)

RENAL REVISION QUESTIONS

Put (T) for the true statement and (F) for the false statement below:

1. Cortical nephrons are located deep in the medulla in cortex. (F)
2. Vasa recta are the blood supply of juxtamedullary nephron (T)
3. Glomerular capillary hydrostatic pressure changes will affect GFR (T)
4. The negatively charged molecule is the fastest to be filtered +ve is faster. (F) albumins.
5. The filtrated fluid at the end of the proximal convoluted tubule is iso-osmolar (T)
6. The filtrated fluid at the end of the proximal convoluted tubule has glucose concentration similar to that of plasma begining. bec/glucose reabsorbed compeletly (F)
7. Sodium is actively reabsorbed from the basolateral membrane at the PCT ATPase (T)
8. The glomerular filtration rate is typically equal to 700 ml/min 125 ml/min (F)
9. 65 % of the water filtered in the glomerulus is reabsorbed in PCT 60-70% (T)
20%
10. The tubulo glomerular mechanism is a negative feed back regulating filtration rate (T)
11. The hyper hypo smolality of the filtrate in the thick ascending loop of Henle is due to Nacl reabsorption (F)
12. The slow flow rate of the filtrate trigger the release of renin (T)
13. A healthy individual will pass a small quantity of hyper concentrated urine in presence of ADH (T)
14. Renin secretion secretion leads to hypovolemia (low blood volume) ADH (F)
15. The clearance of PAH RPF is equal to glomerular filtration rate (GFR) clearance of Inulin (F)
16. The transport maximum of a glucose varies constant with the length of time the glucose is present in the tubules (F)
17. Collecting duct is permeable to urea in the presence of ADH → hyperosmolarity in Interstit (T)
18. An individual suffering from diabetes inspidius forms concentrated urine No ADH (F)
19. A counter current multiplier exchanger mechanism is responsible for the maintenance of hyperosmolar medulla (T)
20. Micturition reflex is triggered when urine volume in the bladder reaches 30ml (F)
400ml

[MCQ TEAM]

> Renal Microbiology +immunology

MCQ

٤٢٩

MIcro

1. which is an opportunistic pathogen:

a. A. pseudomonia *
b. B. diphtheria
C. TB
D. Staphylococcus aureus
E. streptococcus

2. Which drug inhibit cell wall synthesis:

c. A. Pencillin *
d. B. Polymyxin
e. C. isoniazide
f. D. Sulphonamide

3. which of the following cause urinary tract infection :

a) A streptococcus
g. b)streptococci agalactiae
h. c) staph. aureus
i. d) group D streptococci (strept. Faecalis) *
j. e) pneumococcus
k.

4. The following bacteria causes urinary tract infection in female :

a) staph. aureus
b) staph. epidermis
c) staph. saphrophiticus *
d) strepto. Group A

5-The most common causative agent of UTI:

l. A. klebsiella
m. B. Staph. aureus
n. C. E . coli *

ImmUnE

يمكن الاسئلة تكون مو مرتبطة باللي اخذناه هالبلوك بس هذا اللي قدرنا نجمعه

سؤال ٦ و٧ اتوقع انها عن محاضرة مابعد ميد اللي هي عن نقل الكلية

) **Regarding cytokines, all of the following are true EXCEPT:**

A. They are low molecular weight proteins.
B. They act with surface receptors.
C. They are long acting mediators.
D. They regulate inflammation.

2**) The antibody released during primary immune response:**

A. IgM
B. IgG
C. IgE

3) All are features of complement system EXCEPT:

A. lysis of damaged cells.
B. Chemoattractants for neutrophils.
C. Participates in inflammation.
D. Inhibits cytokines.

4) T-cell receptors or antibodies react with antigens:

A. Because both are made by lymphocytes.
B. Because of complementary of molecular fit of both with antigen.
C. Because both have light chain and heavy chain polypeptides.
D. Cause histamine release.
E. Facilitate perforin release.

5) Antigen-antibody reactions can result in the following:

A. Agglutination.
B. Complement fixation.
C. Virus neutralization.
D. Allergic reaction.
E. All of the above.

6) 40 years old man requires a kidney graft due to end-stage renal disease. His HLA genotype was as follows: HLA-A3/A6.B27/B44,CI/C8,DR1/DR4.

He brought 5 donors and tissue typing was performed. Which one of them is the best choice?

Donor no.1 HLA type : HLA-A3/A8, B7/B28, C4/C8, DRI/DR4.

Donor no.2 HLA type : HLA-A6/A6, B27/B24, C12/C1, DR1/7.

Donor no.3.HLA type : HLA-A27/A44, B1/B8, C3/C6, DR3/DR14.

Donor no.4 HLA type : HLA-A3/A6, B24/B7,C2/C9, DR4/DR7.

Donor no.5 HLA type : HLA-A3/A3, B27/B44, C1/C8, DR4/DR4.

choice no.5 because only 2 alleles are different.

7) Which one is more important for graft survival MHC-class1 or MHC-class11 matching ?

MHC11 is more important.

In fact, The more compatibility between MHC11 of host and donor, the more is the rate of graft survival rate.

[MCQ TEAM]

> Renal pathology

MCQ

٤٢٩

ملاحظات مهمة:

اول شئ لاتنسوا تشوفوا سلايدس احمد العقيل الله يجزاه بالخير ومثل ماقال الاحمر معناته مهم

الشئ الثاني حتلقوا مع هذا الملف ، ملفين

فيهم اسئلة حلوة عن رينال باثPdf

The nephritic syndrome is least likely to occur in which diseases?

Diabetic nephropathy .A
Minimal –change disease .B
Post –streptococcal glomerulonephritis .C
Membrane glomerulopathy .D
Focal segmental glomerulosclerosis .E

Which one of the following statements about membranous glomerulonephritis is true?

The patient has antibodies against basement membrane .A
Lymphocytes are prominent in the mesangial region .B
Glomerular epithelial crescent is diagnostic .C

Glomerular basement membrane "spike" and (spike and dome pattern) mesangial cells proliferation are prominent
a unilateral large kidney mass in a three year old girl ,It might to be

Renal cell carcinoma .A
Transitional cell carcinoma .B
Focal segmental glomerulosclerosis .C
Wilm's tumor .D
angiolioma .E

each of the following statements about post –streptococcal glomerulonephritis are true except?

it is adisease of age group and…….failure .A

Pre-renal azotemia is seen in all except:

A] Congestive heart failure.
B] Stock.
C C] Hypovolemia.
D] Hemorrhage.
E] Hypertension.

Q.22 All the clinical manifestations of renal failure are reversible:

A] Pericarditis.
B] Myopathy.
E C] Encephalopathy.
D] Peripheral neuropathy.
E] None of the above.

Q.23 All are true about acute post streptococcal glomerulonephritis

except:

A] Peak age of incidence is 6-10 years.
B] It is due to Group A beta hemolytic streptococci.
E C] Most common types are 12, 4, 1.
D] Raise in ASO titres.
E] Raise the serum concentration of C3.

Q.24 All of the following can lead to membranous glomerulonephritis Except:

A] SLE.

B] Diabetes mellitus.

C] Thyroiditis.

D] Ovarian cancer.

E] Bronchogenic carcinoma.

Q.25 All of the following infections lead to membranous

glomerulonephritis except:

A] Syphilis.

B] H.B.V.

C] H.I.V.

D] Schistosomiasis.
E] Malaria.

Q.26 All of the following are dialysis associated changes in chronic

glomerulonephritis except?

A] Arterial intimal thickening.

B] Acquired cystic disease.

C] Deposition of calcium oxalate crystals in interstitium.

D] Borderline adenocarcinoma.

E] Widening of minor calyces.

Q.27 All include complications of chronic glomerulonephritis except:

A] Uremic pericarditis.

B] Uremic gastroenteritis.

C] Secondary hypoparathyroidism.

D] Reanl osteodystrophy.

E] Uremic penumonitis.

Q.29 All the following cause nephrotoxic ATN except:

A] Cyclosporine.

B] Mercury.

C] Lead.

D] Arsenic.

E] Bismuth.

Which one of the following is NOT a characteristic of diabetic nephropathy?

Membranous glomerulonephritis-A

Glomerulosclerosis-B

Arteriosclerosis-C

Necrotizing papillitis-D

pyelonephritis-E

10) A small renal infarct undergoes:

1) Caseation
2) Fibrosis
3) Gangrenous change
4) Regeneration
5) Resolution

The most common cause of nephrotic syndrome in paediatrics population is (A)

A) Minimal change disease

B) Mesangial proliferation
C) Focal segmental glomerulosclerosis
D) Membranous nephropathy
E) membranoproliferative glomerulonephritis

Below are the characteristic features of nephrotic syndrome EXCEPT
(C)
A) Proteinuria more than 40mg/m2/hour
B) Hypoalbuminaemia
C) gross haematuria
D) Oedema
E) Hyperlipidaemia

A 52-year-old Caucasian male presents with sinus pain and drainage, bloody nasal discharge, and nasal mucosal ulceration. On laboratory examination, the man is found to have proteinuria, hematuria, and red blood cell casts. A biopsy of the upper airway tissue reveals granulomatous inflammation with necrosis. Renal biopsy confirms the existence of glomerulonephritis. Blood tests show the presence of antineutrophil cytoplasmic antibodies (c-ANCA). What is the most likely diagnosis?
(E)
A. Allergic angiitis
B. Goodpasture's syndrome
C. Non-infectious granulomatous disease
D. Tumors of the upper airway
E. Wegener's granulomatosis

A 3-year-old boy with an enlarging, left-sided, abdominal mass undergoes diagnostic biopsy. The tumor reveals a variety of cellular patterns: dense immature islands of epithelial cells, ribbons of spindled fibroblast-like stromal cells, and poorly formed tubular structures. This triphasic histology is most suggestive of which of the following childhood neoplasms?
(E)
A. Embryonal rhabdomyosarcoma
B. Ewing's sarcoma
C. Hodgkin's disease
D. Neuroblastoma
E. Wilms' tumor

Question-B

A clinical study is performed with pediatric subjects who had minimal change disease. These patients are observed to have prominent periorbital edema. Laboratory test findings from serum and urine tests are analyzed. Which of the following laboratory test findings is most likely to be consistently present in these subjects?.

A Nitrite positive urinalysis specimen
B Proteinuria >3.5 gm/24 hours
C Hematuria with >10 RBC/hpf
D Lipiduria in association with hypercholesterolemia
E Renal tubular epithelial cells and casts

Question-C ---- ___

A 12-year-old boy is a member of a family with a history of renal disease, with males more severely affected than females. He is found to have auditory nerve deafness, corneal dystrophy, and ocular lens dislocation. A urinalysis shows microscopic hematuria. A renal biopsy is performed. Microscopically, the glomeruli show glomerular capillaries with irregular basement membrane thickening and attenuation with splitting of the lamina densa. The mesangial matrix is increased and epithelial cells may appear foamy. Which of the following is the most likely diagnosis?

A Goodpasture syndrome
B IgA nephropathy
C Alport syndrome
D Dominant polycystic kidney disease
E Diabetes mellitus, type I

Question-D

A 3-year-old child has become more irritable over the past two months and does not want to eat much at meals. On physical examination the pediatrician notes an enlarged abdomen and can palpate a mass on the right. An abdominal CT scan reveals a 10 cm solid mass involving the right kidney. The resected mass has a microscopic appearance with sheets of small blue cells along with primitive tubular structures. The child receives chemotherapy and radiation therapy, and there is no recurrence. Which of the following neoplasms is this child most likely to have had?

A Angiomyolipoma
B Renal cell carcinoma
C Urothelial carcinoma
D Wilms tumor
E Medullary fibroma

Question-D

A clinical study is performed involving subjects with glomerulonephritis. One group of subjects has a diagnosis of crescentic glomerulonephritis and another group has membranous glomerulonephritis. Which one of the following laboratory findings is most likely to be found in the absence of other findings in

subjects with membranous glomerulonephritis?
A Rapid onset
B Red blood cell casts
C Oliguria
D Albuminuria
E Hypertension

Question-A
A 50-year-old man is hospitalized for acute myocardial infarction. He has decreased cardiac output with hypotension requiring multiple pressor agents. His urine output drops over the next 3 days. His serum urea nitrogen increases to 59 mg/dL, with creatinine of 2.9 mg/dL. Urinalysis reveals no protein or glucose, a trace blood, and numerous hyaline casts. Five days later, he develops polyuria and his serum urea nitrogen declines. Which of the following pathologic findings in his kidneys is most likely to have caused his azotemia?
A Patchy tubular necrosis
B Fusion of podocyte foot processes
C Glomerular crescents
D Hyperplastic arteriolosclerosis
E Mesangial immune complex deposition

Question-C
A 43-year-old man goes to his physician for a routine check of his health status. He is found to have a blood pressure of 150/95 mm Hg. His urinalysis shows pH 6.5, specific gravity 1.015, no glucose, blood, or protein, and no casts. His serum creatinine is 1.4 mg/dL. If he is not treated, which of the following conditions will most likely cause his death?
A Intracerebral hemorrhage (stroke)
B Aortic aneurysm rupture
C Congestive heart failure
D Chronic renal failure
E Intracranial aneurysm rupture

Question-B
A 60-year-old woman is admitted with sudden onset of chest pain and is diagnosed with an acute myocardial infarction. There is difficulty maintaining adequate blood pressure and tissue perfusion for 3 days. Her serum lactate becomes elevated. Her serum urea nitrogen and creatinine are noted to be increasing. Granular and hyaline casts are present on microscopic urinalysis. Which of the following renal lesions is most likely to be present in this situation?
A Chronic pyelonephritis
B Acute tubular necrosis

C Nodular glomerulosclerosis
D Renal vein thrombosis
E Minimal change disease

Question-A
A 15-year-old girl has had increasing lethargy following a bout of the "flu" 3 weeks ago. On physical examination there are no abnormal findings. Her condition does not improve after 3 weeks on corticosteroid therapy, so a renal biopsy is performed. Microscopic examination shows segmental sclerosis of 3 of 10 glomeruli identified in the biopsy specimen. Immunofluorescence studies and electron microscopy do not show immune deposits. What is the most appropriate advice to give the girl's parents regarding her condition?
A She may require a renal transplant in 10 years
B She will probably improve with additional corticosteroid therapy
C She will likely develop a restrictive lung disease
D She has an underlying malignancy
E She will improve if she loses weight

Question-B
A clinical study is performed with subjects born with congenital urinary tract anomalies to assess the development of long term complications. One group of subjects is found to have an increased risk for development of a carcinoma. Which of the following congenital anomalies is most likely to carry this risk?
A Unilateral renal agenesis
B Bladder exstrophy
C Bilateral ureteral duplication
D Horseshoe kidney
E Medullary sponge kidney

Question-E
A 25-year-old G3 P2 woman has felt no fetal movement by 18 weeks gestation. Fetal ultrasound scan reveals the lack of amniotic fluid, making imaging difficult, but bilaterally asymmetrically enlarged fetal kidneys are seen. No fetal bladder can be visualized. The fetal heart appears to have four chambers, and the feet have marked varus deformities. At the time of birth at 36 weeks gestation, the neonate has severe respiratory difficulty. Which of the following is the most likely diagnosis?
A Bilateral Wilms tumor
B Dominant polycystic kidney disease
C Urethral atresia
D Hypospadias

E Multicystic renal dysplasia

Question-C
A 30-year-old man has noted puffiness around his eyes and swelling of his feet for the past 2 weeks. On physical examination his blood pressure is 155/95 mm Hg. Urine microscopic examination reveals oval fat bodies. Which of the following conditions is he most likely to have?

A Ascending pyelonephritis
B Nephritic syndrome
C Nephrotic syndrome
D Obstructive uropathy
E Renal infarction
F Papillary necrosis

Question -A
A 5-year-old child has been noted by his mother to be lethargic for 2 weeks. On physical examination he has periorbital edema. He is afebrile. Dipstick urinalysis reveals no glucose, ketones, or blood, but he has 4+ proteinuria present. Microscopic urinalysis reveals no casts, but oval fat bodies are seen. He is treated with corticosteroid therapy and his condition improves.

Which of the following renal electron micrographic findings is most characteristic for this child's disease?

A Fusion of foot processes
B Subepithelial electron dense deposits
C Duplication of glomerular capillary basement membranes
D Irregular thickening of the glomerular basement membranes
E Mesangial cell proliferation

اسئلة من احد الكتب اجوبتها بنهاية الاسئلة

3**28. The basic abnormality producing metabolic alkalosis is**
a. Decreased arterial hydrogen ion concentration with increased arterial bicarbonate causing arterial pH to be greater than 7.4
b. Decreased respirations with increased arterial carbon dioxide and hydrogen ion concentrations causing arterial pH to be less than 7.4
c. Increased arterial hydrogen ion concentration with decreased arterial bicarbonate causing arterial pH to be less than 7.4

d. Increased arterial hydrogen ion concentration with decreased arterial bicarbonate causing arterial pH to be greater than 7.4
e. Increased respirations with decreased arterial carbon dioxide and hydrogen ion concentrations causing arterial pH to be greater than 7.4

329. An anxious 19-year-old female presents with perioral numbness and carpopedal spasm. Laboratory examination reveals decreased PCO2 and decreased bicarbonate. Which one of the listed conditions is most consistent with these findings?
a. Metabolic acidosis due to ketoacidosis
b. Metabolic acidosis due to renal tubular acidosis
c. Metabolic alkalosis due to thiazide diuretic
d. Respiratory acidosis due to hypoventilation
e. Respiratory alkalosis due to hyperventilation

330. In utero bilateral renal agenesis is most likely to produce
a. Anencephaly
b. Gastroschisis
c. Oligohydramnios
d. Polycythemia
e. Retrolental fibroplasia

331. An 8-month-old male infant presents with progressive renal and hepatic failure. Despite intensive medical therapy, the infant dies. At the time of autopsy, the external surfaces of his kidneys are found to be smooth, but cut section reveals numerous cysts that are lined up in a row. What is the mode of inheritance of this renal abnormality?
a. Autosomal dominant
b. Autosomal recessive
c. X-linked dominant
d. X-linked recessive
e. Mitochondrial

332. What is the most likely cause of the combination of generalized edema, hypoalbuminemia, hypercholesterolemia, marked proteinuria, and fatty casts and oval fat bodies in the urine?
a. Nephritic syndrome
b. Nephrotic syndrome
c. Acute renal failure
d. Renal tubular defect
e. Urinary tract infection

333. A 35-year-old female recovering from hepatitis B develops hematuria, proteinuria, and red cell casts in the urine. Which of the following would best describe the changes within the kidney in this patient?
a. Plasma cell interstitial nephritis

b. IgG linear fluorescence along the glomerular basement membrane
c. Granular deposits of antibodies in the glomerular basement membrane
d. Diffuse thickening of the glomerular basement membrane by subepithelial immune deposits
e. Nodular hyaline glomerulosclerosis

334. Treatment with steroids would most likely produce a beneficial response in a young child with
a. Acute cystitis
b. Acute pyelonephritis
c. Focal segmental glomerulosclerosis
d. Minimal change disease
e. X-linked agammaglobulinemia

335. A 28-year-old male with AIDS presents with moderate proteinuria and hypertension. Histologic sections of the kidney reveal the combination of normal-appearing glomeruli and occasional glomeruli that have deposits of hyaline material. No increased cellularity or necrosis is noted in the abnormal glomeruli. Additionally, there is cystic dilation of the renal tubules, some of which are filled with proteinaceous material. Electron microscopy reveals focal fusion of podocytes, and immunofluorescence examination finds granular IgM/C3 deposits. What is the best diagnosis for this renal abnormality?
a. Diffuse proliferative glomerulonephritis (DPGN)
b. Focal segmental glomerulonephritis (FSGN)
c. Focal segmental glomerulosclerosis (FSGS)
d. Membranous glomerulopathy (MGN)
e. Minimal change disease (MCD)

336. A 7-year-old boy presents with bilateral swelling around his eyes. His parents state that the child's eyes have become "puffy" over the past several weeks, and his urine has become cocoa-colored. Physical examination reveals bilateral periorbital edema, but peripheral edema is not found. The boy is afebrile and his blood pressure is slightly elevated. A urinary dipstick reveals mild proteinuria, while microscopic examination of the boy's urine reveals hematuria with red blood cell casts. Laboratory tests reveal increased ASO titers and decreased serum C3 levels, but C2 and C4 levels are normal. A throat swab for streptococci is negative. A microscopic section from the kidney reveals increased numbers of cells within the glomeruli. An electron microscopic section of the kidney reveals large electron-dense deposits in the glomeruli that are located between the basement membrane and the podocytes. The foot processes of the podocytes are otherwise unremarkable. Which one of the following renal diseases most likely produced the abnormalities in this young boy?
a. Acute post-streptococcal glomerulonephritis
b. Focal segmental glomerulonephritis

c. Focal segmental glomerulosclerosis
d. Membranous glomerulonephritis
e. Minimal change disease

337. Immune complexes located within the glomerular basement membrane would most likely be found in a patient with

a. Acute glomerulonephritis (GN)
b. Membranous GN
c. Type I membranoproliferative glomerulonephritis (MPGN)
d. Type II MPGN
e. IgA nephropathy

338. A 21-year-old female presents because her urine has turned a brown color. She states that about 2 months ago her urine turned brown 2 days after a cold and stayed brown for about 3 days. At the current time a urinalysis reveals 2□□blood with red cells and red cell casts. Further laboratory tests include a complete blood count (CBC), serum electrolytes, BUN, creatinine, glucose, antinuclear antibodies (ANAs), and serum complement levels (C3 and C4). All of these tests are within normal limits. Immunofluorescence examination of a renal biopsy from this patient reveals the presence of large, irregular deposits of IgA/C3 in the mesangium. A linear staining pattern is not found. What is the most likely diagnosis for this patient?

a. Berger's disease
b. Focal segmental glomerulosclerosis
c. Goodpasture's disease
d. Lipoid nephrosis
e. Membranoproliferative glomerulonephritis

339. Rapidly progressive glomerulonephritis is characterized histologically by

a. Crescents in the glomeruli
b. Fibrinoid necrosis of the afferent arterioles
c. Fibromuscular hyperplasia of the renal artery
d. Neutrophils in the interstitium
e. Splitting of the basement membrane by mesangial cells

340. A linear pattern of immunoglobulin deposition along the glomerular basement membrane that can be demonstrated by immunofluorescence is typical of

a. Lupus nephritis
b. Diabetic glomerulopathy
c. Goodpasture's syndrome
d. Goldblatt's kidney

e. Renal vein thrombosis

341. A characteristic histologic feature of class IV lupus nephritis is
a. "Holly leaf " mesangial deposits
b. "Spike and dome" appearance of the basement membrane
c. "String of popcorn" immunofluorescence pattern
d. "Tram-track" splitting of the basement membrane
e. "Wire-loop" appearance of the glomerular capillaries

342. Marked thickening of the glomerular basement membrane, as shown in the photomicrograph below, may be seen in
a. Lipoid nephrosis
b. Diabetes mellitus
c. Goodpasture's syndrome
d. Acute pyelonephritis
e. Chronic glomerulonephritis

343. Histologic sections of a kidney reveal patchy necrosis of epithelial cells of both the proximal and distal tubules with flattening of the epithelial cells, rupture of the basement membrane (tubulorrhexis), and marked interstitial edema. Acute inflammatory cells are not seen. What is the best diagnosis?
a. Acute pyelonephritis
b. Acute tubular necrosis
c. Chronic glomerulonephritis
d. Chronic pyelonephritis
e. Diffuse cortical necrosis

344. The gross appearance of the kidney shown below is most compatible with which of the following conditions?
a. Cystic renal dysplasia
b. Acute pyelonephritis
c. Chronic pyelonephritis
d. Acute glomerulonephritis
e. Chronic glomerulonephritis

345. During a routine physical examination, a 42-year-old female is found to have an elevated blood pressure of 150/100 mmHg. Workup reveals a small left kidney and a normal-sized right kidney. Laboratory examination reveals elevated serum renin levels. Further workup reveals that renal vein renin levels are increased on the left but decreased on the right. This patient's hypertension is most likely the result of
a. Atherosclerotic narrowing of the left renal artery
b. Atherosclerotic narrowing of the right renal artery
c. Fibromuscular hyperplasia of the left renal artery
d. Fibromuscular hyperplasia of the right renal artery
e. Hyaline arteriolosclerosis

346. Which one of the following gross appearances of a kidney is most characteristic of malignant nephrosclerosis?

a. Broad U-shaped cortical scars overlying dilated calyces in renal poles
b. Depressed cortical areas overlying necrotic papillae of varying stages
c. Multiple small petechial hemorrhages on the surface
d. Multiple small white areas on the surface
e. Wedge-shaped (i.e., V-shaped) pale cortical scars

347. The combination of severe acute flank pain and microscopic hematuria is suggestive of

a. Cholelithiasis
b. Choledocholithiasis
c. Kidney tumor
d. Urinary bladder tumor
e. Urolithiasis

348. The kidney shown in the photomicrograph below exhibits a tumor that originated in the upper pole. Histologic sections from this lesion would most likely reveal

a. Clear cell carcinoma
b. Signet cell carcinoma
c. Small cell carcinoma
d. Squamous cell carcinoma
e. Transitional cell carcinoma

349. Which one of the listed individuals is most likely to have a tumor that has a histologic appearance characterized by undifferentiated mesenchymal cells with immature tubules and abortive glomerular formation?

a. A 2-week-old infant with a midepigastric mass, projectile vomiting, and normal urinary hydroxy-indoleacetic acid (HIAA)
b. An 8-month-old infant with an abdominal mass and normal urinary vanillylmandelic
acid (VMA)
c. A 14-month-old infant with an abdominal mass and increased urinary VMA
d. A 13-year-old child with basophilic stippling of erythrocytes and increased urinary aminolevulinic acid (ALA)
e. A 39-year-old female with abdominal cramps, watery diarrhea, periodic facial flushing, wheezing, and increased urinary HIAA

350. Physical examination of a 3-day-old male infant reveals urine leaking from the area of the umbilicus. What is the correct diagnosis?

a. Balanoposthitis
b. Meckel's cyst
c. Meckel's diverticulum
d. Omphalocele

e. Urachal fistula

351. **A 19-year-old male presents with dysuria and a yellow-green urethral discharge. No prostatic pain is present. Microscopic examination of the discharge reveals numerous neutrophils, but no bacteria are present. Which one of the following is the best diagnosis for this individual given only this information?**

a. Acute cystitis
b. Acute prostatitis
c. Gonococcal urethritis
d. Interstitial cystitis
e. Nongonococcal urethritis

352. A biopsy of the mucosa of the urinary bladder from an individual with acute cystitis due to infection with Escherichia coli would most likely reveal

a. An infiltrate of lymphocytes and plasma cells
b. An infiltrate of neutrophils
c. Inflammation with eosinophils
d. Noncaseating granulomas
e. Sheets of macrophages with granular cytoplasm

353. A 49-year-old male who is a long-term smoker presents with frequency and hematuria. Histologic examination of sections taken from an exophytic lesion of the urinary bladder reveal groups of atypical cells with frequent mitoses forming finger-like projections that have thin, fibrovascular cores. These groups of atypical cells do not extend into the lamina propria and muscularis. No glands or keratin production are found. What is the most accurate diagnosis for this bladder tumor?

a. Adenocarcinoma, noninvasive
b. Inverted papilloma
c. Transitional cell carcinoma in situ
d. Papillary transitional cell carcinoma (TCC), noninvasive
e. Squamous cell carcinoma in situ

Urinary System Answers

328. The answer is a.
329. The answer is e.
330. The answer is c.
331. The answer is b.
332. The answer is b.
333. The answer is c.
334. The answer is d.
335. The answer is c.
336. The answer is a.
337. The answer is d.
338. The answer is a
339. The answer is a.
340. The answer is c.
341. The answer is e.
342. The answer is b.
343. The answer is b.
344. The answer is c.
345. The answer is c.
346. The answer is c..
347. The answer is e.
348. The answer is a.
349. The answer is b.
350. The answer is e.
351. The answer is e.
352. The answer is b.
353. The answer is d.

[MCQ TEAM]

> Renal Biochemistry

MCQ

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(Qs of 1st lecture thanks for MJW)

These are the main 3 Questions أستغفر الله:

1. Kidney function, hormonal function: secretion of rennin, Erythropoietin & 1,25DHCC.

2. Creatinine clearance is only recomnded in the following condtions :

- Patient with early (minor) renal disease.
- Assessment of possible kidney donors.
- Detection of renal toxicity of some nephrotoxic drugs.

3. If a patient came to you, and you did serum creatinine and serum urea tests. Serum creatinine was normal BUT serum urea was high, does that means the patient has renal failure?

NO he doesn't have real failure; serum urea could be high from dehydration (vomiting or diarrhea).
الدكتور عليها ركز إلي هذي :

4. Urea is the end product of Amonia

5. Creatinine is the end product of creatine catabolism.

OlD QS

1- Regarding urine analysis :
a. Fructosuria might be due …
b. Porphyrias might be associated …
c. Albuminuria is associated with …
d. Alkaline urine might be due in urinary…

A monoclonal increase of immunoglobulin …
a- Rheumatoid arthritis
b- Tuberculosis
c- Chronic liver disease
d- Multiple myeloma
e- Sarcoidosis

Ketonuria might be due to one of the following conditions EXCEPT
a- Diabetes mellitus

b- Glycogen storage disease
c- Prolonged starvation
d- Prolonged vomiting especially in pregnant women
e- Diabetes insipidus

The urinary test that can differentiate between diabetes mellitus and …
a- Urine volume
b- Urine color
c- Specific gravity
d- Nitrite test
d- Biliruben

17-Gamma glutamyl transferase is one of the indicator of …

18- Bilirubin does NOT freely cross the BBB because it …

19- All plasma proeins synthesized by liver

20- Bence-Jones proteins precipitate at 100 C

Color means we aren't sure that Q with us

26- Protein electrophoresis
a- Is a quantitative technique
b- Requires antigen-antibody reaction for complete separation
c- Depends on migration of charged particles to the electrode carrying opposite charge
d- Indicates separation of one protein in each broad band
e- Used to separation of proteins from lipid

-

Formyl methionine is the N-terminal amino acid of human protein

6- A one year old female patient is anemic. Her urine contain as elevated level of orotic acid. The intake of which one of the following compounds is most likely to control her condition:

a. Thymidine.

b. Hypoxanthine.

c. Uridine. ✓

d. Allopurinol.

e. Adenine

5- to convert homocystein to methionine we need :

a. Pyridoxal phosphate
b. Methylcobalamin
c. Methyltetrahydorfolate

7- Pyrodoxin (Vit. B6) is involved in all the following reactions EXCEPT :

a. Transamination of a.a
b. Condensation of a.a
c. In carboxylase enzyme
d. In deaminase a.a

8- As in protein in urine:

a. Albumin is normally present in urine in high amount.
b. Bence-Jones protein precipitate at 100 C.
c. Nephrotic syndrome causes marked renal proteinuria.
d. Bladder stones causes prerenal proteinuria.
e. Glomerulonephritis may cause postrenal proteinuria.

13- Regarding to biological value, Incorrect:

a. It is low for plant.
b. Mixing b/w wheat and kidney beans may improve the biologic value.
c. The biological value of milk protein is 100.
d. It is low for gelatin.
e. It is a measure of its ability of a protein to provide the essential amino acid.

14- As regards the carbohydrate of the diet:

a. The absence of it leads to degradation of body proteins.
b. They are essential.
c. They yield about 9 kcal/g.
d. Dietary rich in sucrose may lead to DM.
e. The energy content of carbohydrate is more than twice that of fat.

16- Which the following amino acid is essential:

a. Glycine.
b. Serine.
c. Phenylalanine.
d. Tyrosine.
e. Glutamic acid.

17- As regards Vitamin B6, all the followings are true EXCEPT:

a. All forms of Vitamin B6, are derivatives of pyridine.
b. Some of Vitamin B6 form found in food obtained from animal.
c. Deficiency of Vitamin B6 may caused by isoniazid.
d. All forms of Vitamin B6 function as coenzymes for catalyze.
e. The active form is required for formation of histamine from histidine

18- Which of the following cofactors must be present during conversion of pyrovate to acetyl CoA:

a. Ascorbic Acid.
b. Biotin
c. Thiamine pyrophosphate.
d. NADP+.
e. Methylcobalamine.

4) Adrenaline and Noradrenaline are formed from

One answer only.

a) Proline

b) Tryptophan

c) Glycine

d) Tyrosine

Correct Answer: d

5) Amino acid NOT involved in urea synthesis

One answer only.

a) Ornithine

b) Citrulline

c) Arginine

d) Histidine

Correct Answer: d

T or F

s-adenosyl methionine is the methyl donor required for conversion of dUMP into dTMP. F

3- Thiamine deficiency in infants is characterized by CNS & CVS disorders T

تم بحمد الله

وبالتوفيق للجميع ياارب =)