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Barasat, Kolkata -700125

BRAINWARE UNIVERSITY

Term End Examination 2021 - 22

Programme – Bachelor of Science in Physician Assistant

Course Name – Nephrology

Course Code - BPA504

(Semester V)

Time : 1 Hr.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

- (1) Following are the parts of glomerulus except,

a) PCT	b) Afferent arteriole
c) Efferent arteriole	d) Macula densa
- (2) Which of the following is not a part of Urine formation

a) Glomerular filtration	b) Tubular reabsorption
c) Autoregulation	d) Concentration
- (3) Reflex into pelvis and calyces without dilation

a) I	b) II
c) II	d) IV
- (4) According to American Urology Association, definition of microscopic hematuria:

a) > 5 RBCs/hpf	b) > 15 RBCs/hpf
c) > 50 RBCs/hpf	d) > 10 RBCs/hpf
- (5) Renal autoregulation is the ability of the kidneys to

a) increase glomerular filtration in hypotension	b) decrease glomerular filtration in hypotension
c) maintain a relatively stable GFR inspite of the changes in BP	d) decrease GFR if BP is high.
- (6) Mechanisms of proximal tubular reabsorption are all, Except

a) Solvent Drag	b) Active transport of Na ⁺
c) Secondary water reabsorption via osmosis	d) Osmotic absorption of glucose
- (7) Which of the following is not true

a) Stage I CKD \leq 80 ml/min/1.73 m ²	b) Stage III CKD- GFR 30-59 ml/min/1.73 m ²
c) Stage I CKD- GFR \geq 90 ml/min/1.73 m ²	d) Renal failure(ESRD)- GFR < 15ml/min/1.73 m ²

- (8) All are at risk for developing CKD, Except
- a) Hypertension
 - b) Auto immune diseases
 - c) Diabetes mellitus
 - d) Hyperthyroidism
- (9) A 60 years old male patient comes to the OPD with inability to pass urine for last few hours, He has history of hypertension which is poorly controlled. He also complains of lower abdominal pain for last few hours. On examination a diffuse bulge is noted in the lower abdomen, He has probably
- a) Acute renal failure with anuria
 - b) Bladder outlet obstruction due to prostatic enlargement
 - c) All of these
 - d) None of these
- (10) In prerenal Azotemia, all are false except
- a) Plasma BUN : CR < 10
 - b) Urine specific Gravity < 1.020
 - c) FENA < 2%
 - d) Urine osmolarity > 500
- (11) Indications of Dialysis all are except
- a) Toxicity by some drugs
 - b) Severe metabolic alkalosis
 - c) Fluid overload
 - d) Uremia
- (12) Pyelonephritis (acute) is a sudden development of kidney inflammation, It is caused by all except
- a) Kidney stones
 - b) UTI
 - c) Diabetes mellitus
 - d) Hypertension
- (13) All are nephrotoxic drugs, Except
- a) Aminoglycosides
 - b) NSAIDS
 - c) Amphotericin
 - d) Ceftriaxone
- (14) The following are true of interstitial cystitis (IC/BPS), Except
- a) Increased daytime and night time frequency
 - b) No obvious pathology
 - c) Presence of urgency and infection
 - d) Suprapubic pain
- (15) NIDDK criteria for IC are all false, Except
- a) Pain during passing urine
 - b) Bleeding during passing urine
 - c) Fever or chills
 - d) Glomerulations on endoscopy and Hunner's ulcer
- (16) Disadvantages of hemodialysis are all except
- a) Efficient
 - b) Costly
 - c) Permanent access is required
 - d) Requires a dedicated set up
- (17) All are parts of male urethra, Except
- a) Prostatic Urethra
 - b) Penile Urethra
 - c) Bladder Neck
 - d) Spongy Urethra
- (18) Modifiable risk factors for CKD include:
- a) Diabetes
 - b) Hypertension
 - c) History of AKI
 - d) All of these
- (19) NKF recommends the following calculator be used to estimate GFR for CKD staging:
- a) CKD-EPI
 - b) MDRD
 - c) Cockcroft-Gault
 - d) All of these
- (20) Target blood pressure in non-dialysis CKD with a albumin-to-creatinine ratio of <30mg/g should be:
- a) 120/80mmHg
 - b) 140/90mmHg

- c) 150/90mmHg
d) 130/80mmHg
- (21) Vitamin D3 is the preferred vitamin D form to achieve normal serum vitamin D levels
a) Vitamin D3 is not applicable
b) It is applicable
c) 1
d) None of these
- (22) Urine dipstick analysis can yield information about:
a) Bence Jones protein
b) Microalbumin
c) Nitrates
d) Hemoglobin
- (23) Hypokalemia can cause
a) Central diabetes insipidus
b) Rhabdomyolysis
c) Seizures
d) ST elevation on ECG
- (24) Which CKD Stage to most of the complications of Kidney Failure start?
a) Stage A
b) Stage 1
c) Stage 3
d) Stage 5
- (25) HCV induced immune complex disease is associated with
a) Cryoglobulinemic proliferative Glomerulonephritis
b) MPGN
c) Membranous glomerulopathy
d) All of these
- (26) Stains used to enhance basement membrane structure in renal biopsy
a) Hematoxylin and eosin
b) PAS
c) Jones methenamine silver
d) Masson's trichrome
- (27) Following improve the biocompatibility of a dialysis membrane.
a) More free hydroxyl groups on the membrane surface
b) Less free hydroxyl groups on the membrane surface
c) More free sulfhydryl groups on the membrane surface
d) Less free sulfhydryl groups on the membrane surface
- (28) Identify the wrong statement about Dialysis associated Amyloidosis.
a) Beta 2 Microglobulin is the amyloid precursor protein in dialysis associated amyloidosis
b) Eprex is the specific treatment for this condition
c) Carpal tunnel syndrome is often the first symptom
d) Renal transplant may lead to symptomatic improvement
- (29) Approved systemic therapies for metastatic renal cancer are all EXCEPT
a) Everolimus
b) Tacrolimus
c) Temsirolimus
d) Bevacizumab
- (30) Which part acts as a kidney in dialysis?
a) Dialyzer
b) Nephrolyzer
c) Kidneylyzer
d) Hemolyzer
- (31) How many times a week dialysis must be done?
a) Every day
b) Once a week
c) Twice a day
d) Thrice a week
- (32) Where is haemodialysis carried out?
a) Home
b) Hospital
c) Both dialysis centre and hospital
d) Dialysis centre
- (33) What can be a side effect of haemodialysis?
a) Cramps
b) Weakness
c) nausea
d) All of the mentioned

- (34) Which mineral must be consumed limitedly for a person undergoing dialysis?
- | | |
|-------|-------|
| a) K | b) Fe |
| c) Zn | d) Mo |
- (35) Which of the following is a problem of peritoneal dialysis?
- | | |
|-------------|-------------------------|
| a) Nausea | b) Abdominal infection |
| c) Insomnia | d) Respiration problems |
- (36) What is the difference between diet for peritoneal dialysis and haemodialysis?
- | | |
|------------------|-----------------------|
| a) More calories | b) More proteins |
| c) More calcium | d) More carbohydrates |
- (37) According to kidney dialysis, the space around the gut is called as:
- | | |
|----------------------|---------------------|
| a) Peritoneal cavity | b) Abdominal cavity |
| c) Vertebral cavity | d) Renal cavity |
- (38) All of the following mediate Acute Kidney Injury (AKI) via impaired Microvascular Hemodynamics EXCEPT
- | | |
|--------------|-----------------|
| a) Diuretics | b) Cocaine |
| c) Mitomycin | d) Sulfonamides |
- (39) Which of the following statement on the pharmacokinetics of loop diuretics is false ?
- | | |
|--|--|
| a) Toresamide have lesser oral availability than furosemide | b) The elimination half-life of toresamide is more than Furosemide |
| c) Bumetanide has almost 100% bioavailability on oral administration | d) Long term use of diuretics can cause diuretic adaptation and resistance |
- (40) Inorganic phosphate is almost exclusively reabsorbed in
- | | |
|--------------------|--------------------|
| a) Proximal tubule | b) Loop of Henle |
| c) Distal Tubule | d) Collecting duct |
- (41) Which of the following is a FALSE statement about Peritoneal dialysis solutions ?
- | | |
|---|---|
| a) Bicarbonate is the most commonly used buffer in Peritoneal dialysis solutions | b) Skin rash is the most commonly reported adverse effect on the use of Icodextrin |
| c) Dextrose is the osmotic agent used in conventional Peritoneal dialysis solutions | d) Dual-chamber PD solutions have a low concentration of glucose degradation products |
- (42) Which of the following is NOT an extra-renal manifestation of polycystic kidney disease?
- | | |
|--------------------------|---------------------|
| a) hepatic cysts | b) hepatic fibrosis |
| c) mitral valve prolapse | d) Aortic stenosis |
- (43) What treatment is not considered helpful in the management of cystic kidney diseases?
- | | |
|--|--|
| a) tolvaptan in ADPKD | b) everolimus in cystic kidney disease secondary to tuberous sclerosis complex |
| c) everolimus in autosomal polycystic kidney disease | d) Renal transplantation |
- (44) 15% of creatinine is secreted from proximal tubular cells into the tubular lumen to be excreted in urine. Which of the following drugs do not cause a rise in serum creatinine by either interfering with the assay or decreasing creatinine secretion?
- | | |
|-----------------|----------------|
| a) trimethoprim | b) dronedarone |
| c) flucytosine | d) amiloride |
- (45) Which area of the nephron is most susceptible to renal ischaemia?
- | | |
|--------------------|-------------------------|
| a) Cortex | b) Glomerular apparatus |
| c) Proximal tubule | d) Inner medulla |

- (46) Where is the majority of sodium reabsorbed?
- a) Proximal convoluted tubule
 - b) Descending loop of Henle
 - c) Ascending loop of Henle
 - d) Distal convoluted tubule
- (47) Which of the following is characteristic of Bartter's Syndrome?
- a) Secondary hyperaldosteronism
 - b) Hyperkalaemia
 - c) Metabolic acidosis
 - d) Reduced renal concentrating ability
- (48) Which of the following is NOT a recognised cause of acute tubular necrosis?
- a) Paracetamol poisoning
 - b) Hypovolaemia
 - c) Hypertension
 - d) Corticosteroid therapy
- (49) Which of the following concerning renal blood flow is true?
- a) is 40% of the cardiac output at rest
 - b) can be measured using the Fick principle
 - c) is higher in the medulla than the cortex
 - d) is increased when renal nerves are stimulated
- (50) Acute renal failure may be distinguished from chronic renal failure by which of the following?
- a) an increased urinary Na excretion
 - b) left ventricular hypertrophy on the ECG
 - c) renal size on ultrasound scan
 - d) hyperkalaemia
- (51) Which one of the following statements is correct?
- a) reflux nephropathy is inherited as an autosomal recessive trait
 - b) nephrogenic diabetes insipidus is inherited as an autosomal dominant trait
 - c) Alport's syndrome affects females more severely than males
 - d) medullary sponge kidney is typically not inherited but is a congenital condition.
- (52) Which of the following features would be expected in acute tubular necrosis?
- a) Proteinuria on urinalysis
 - b) Red cell casts on urinalysis
 - c) Urine plasma osmolality ratio is more than 1:1
 - d) Urinary sodium concentration greater than 30 mmol/l
- (53) In which of the following circumstances would the treatment of anaemia with erythropoietin still be expected to be effective?
- a) Aluminium toxicity
 - b) Folate deficiency
 - c) Hyperkalaemia
 - d) Infection
- (54) A 66-year-old man has developed chronic renal failure with a serum urea of 60 mmol/L and creatinine of 650 micromol/L. Auscultation of the chest reveals a friction rub over the cardiac apex. He is most likely to have a pericarditis that is termed?
- a) Constrictive
 - b) Fibrinous
 - c) Hemorrhagic
 - d) Purulent
- (55) Oliguria more likely to be due to prerenal failure than intrinsic renal failure if:
- a) urine free of red blood cells or casts
 - b) urine:plasma urea ratio <3
 - c) urine osmolality <350 mOsm/l
 - d) in the presence of hypertension, raised JVP and good peripheral circulation
- (56) A 30 year old man had a blood pressure of 150/100 mmHg. Clinical examination was normal. Which one of the following would suggest secondary hypertension?
- a) 24 hour urinary protein excretion of 1.6g (<0.2)
 - b) A Creatinine clearance of 90 mL/min (70-140)
 - c) Left ventricular hypertrophy criteria on the ECG
 - d) The presence of arteriovenous nicking on funduscopy.
- (57) In asymptomatic chronic renal failure:

- a) there is increase in tubular excretion of urate
- b) serum ionised [calcium] is normal
- c) serum [phosphate] characteristically increase before GFR falls to 30ml/min
- d) increase serum [alkaline phosphatase] mainly due to liver isoenzyme

(58) In chronic untreated renal failure which of the following findings is characteristic?

- a) Hypokalaemia
- b) Hyperosmolar dehydration
- c) Hypercalcaemia
- d) Hypercalcinuria

(59) A 46-year-old woman develops nephrotic syndrome and is awaiting further tests to establish the underlying aetiology. In which circumstance would corticosteroids be most effective in reversing the nephrotic syndrome?

- a) Membranous nephropathy
- b) Minimal change disease
- c) Primary amyloidosis
- d) Renal vein thrombosis

(60) Which of the following is true concerning a 68 year old male with type 2 diabetes diagnosed with type IV renal tubal acidosis?

- a) Aminoaciduria would be expected.
- b) Fludrocortisone treatment is effective
- c) Increased Glomerular filtration rate is expected.
- d) Increased urinary bicarbonate would be expected.