

PHARMACOLOGY

1. Empirical treatment with Ceftriaxone plus Azithromycin is used for treatment of which of the following conditions?

- a. 20-year-old man with fever headache and nuchal rigidity
- b. 30-year-old man with fever with Widal test O antigen > 1:100
- c. 10-year-old child with fever with bulging tympanic membrane
- d. 25-year-old IV drug used with vegetations on heart valves

2. A 60-year-old man with multiple comorbidities is admitted to ER with following discoloration of toes. There is no history of cold exposure or cigarette smoking. The following presentation is caused by which of the following drugs?

- a. Phenytoin
- b. Warfarin
- c. Nicotine
- d. Vancomycin



3. You have given diazepam stat intravenous to patient having convulsion in the ER. Which is correct about mechanism of action of this drug

- a. Hyperpolarization of neurons due to GABA – A activation
- b. Repolarization of neurons due to GABA – A activation
- c. Hyperpolarization of neurons due to GABA – B activation
- d. Repolarization of neurons due to GABA – B activation

4. True statement about a drug having high volume of distribution

- a. Drug is very less distributed in tissues
- b. Drug is mostly bound with plasma protein and less available in tissues
- c. Loading dose is required in such drugs
- d. The drug is mostly polar and hydrophilic

5. A 40-year-old woman comes with history of bloating and upper abdominal pain for last 2 years. She says her friendly chemist gave her Pantoprazole for her gas problem which she takes twice daily. Which of the following is not a side effect of this drug

- a. Pseudomembranous colitis
- b. Osteoporosis
- c. B6 deficiency
- d. Hypomagnesemia

6. Patients with M3- AML are put on treatment. He developed a fever with breathing difficulty. On examination pulse is 100/min, BP 110/70 mm Hg and RR 26 /min with use of accessory muscles of respiration. Which of the following drug is used for management of this patient?

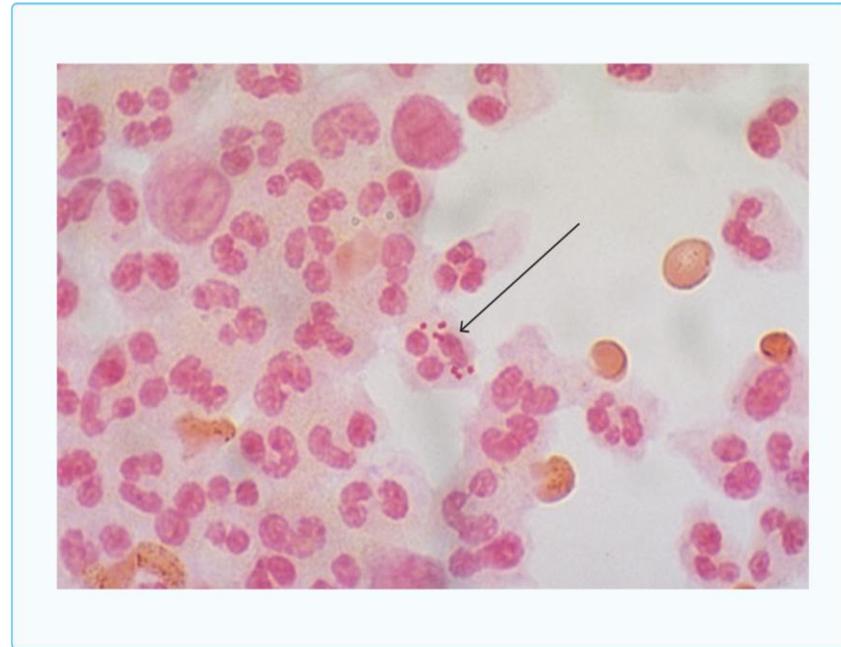
- a. A.T.R.A
- b. Arsenic trioxide
- c. Rituximab
- d. Steroids

7. A 62-year-old man with primary open-angle glaucoma presents for follow-up. Despite treatment with latanoprost eye drops, his intraocular pressure remains elevated at 26 mm Hg. The ophthalmologist adds netarsudil ophthalmic drops to his regimen to further reduce intraocular pressure. Which of the following best explains the mechanism of action of netarsudil?

- a. Increases aqueous humor outflow by inhibiting Rho-kinase in trabecular meshwork
- b. Decreases aqueous humor production by inhibiting carbonic anhydrase in ciliary body
- c. Increases uveoscleral outflow by prostaglandin receptor activation
- d. Decreases aqueous humor secretion by β -adrenergic receptor blockade

8. A 18-year-old college student living in a hostel presents with sudden onset fever, headache, vomiting, and petechial rash. CSF Gram stain is shown below. Which of the following is the recommended chemoprophylaxis for family member?

- a. Ciprofloxacin
- b. Cefixime
- c. Ceftriaxone with Vancomycin
- d. Ceftriaxone with ampicillin



9. Which of the following is the drug of choice for management of digoxin induced toxicity. Heart rate is 38/min with BP 70/50 mm Hg with altered mentation?

- a. Atropine
- b. Digiband
- c. Digitoxin
- d. Lignocaine

10. A 35-year-old veterinarian presents with intermittent fever, night sweats, arthralgia, and malaise for 3 weeks. On examination, he has hepatosplenomegaly. Blood cultures show growth in Castaneda biphasic medium. Which of the following is the most appropriate treatment regimen for this patient?

- a. Doxycycline
- b. Ceftriaxone
- c. Ceftriaxone with Vancomycin
- d. Doxycycline with Rifampicin

11. Which of the following antimicrobials works by damaging cell membranes?

- a. Beta lactam
- b. Liposomal amphotericin B
- c. Aminoglycoside
- d. Azithromycin

12. HIV positive patients are admitted due to odynophagia. UGI endoscopy shows cheesy plaques in the esophagus. Which of the following drugs is used for this patient?

- a. Voriconazole
- b. Amphotericin B
- c. Terbinafine
- d. Echinocandin

13. Which of the following drugs causes factitious hypoglycaemia?

- a. Insulin
- b. Metformin
- c. Acarbose
- d. Empagliflozin

14. Which of the following is correct about mechanism of action of Tirzepatide

- a. GIP receptor antagonist and GLP-1 receptor agonist
- b. GIP receptor antagonist and GLP-1 receptor antagonist
- c. GIP receptor antagonist and GLP-1 receptor agonist
- d. GIP receptor agonist and GLP-1 receptor agonist

15. Optimal ratio for synergistic antibacterial action of trimethoprim and Sulfamethoxazole in the plasma is?

- a. 1:5
- b. 1:10
- c. 1:20
- d. 1:100

16. Vancomycin is drug of choice for management of infection with

- a. Clostridium difficile
- b. Streptococcus pyogenes
- c. E. Coli
- d. Methicillin sensitive staph aureus

17. A 52-year-old man presents with acute onset of severe pain, redness, and swelling in the first metatarsophalangeal joint. Which of the following is the drug of choice for the management of this acute gout attack?

- a. Xanthine oxidase inhibitor
- b. Microtubule polymerization inhibitor
- c. COX-1 inhibitor
- d. Uricosuric drug

18. Which of the following drugs is used to reduce levodopa induced dyskinesia in a patient diagnosed with Parkinson disease?

- a. Benzhexol
- b. Amantadine
- c. Benztropine
- d. Bromocriptine

19. The child is diagnosed with petit mal epilepsy. Which drug will be started in this child?

- a. Thalamic T calcium channel inhibitor
- b. Inhibitor of voltage dependant sodium channels
- c. Enhance GABA activity
- d. NMDA glutamate receptor inhibitor

20. Which of the following drugs can cause black discoloration of the tongue?

- a. Phenytoin
- b. Sucralfate
- c. Valproate
- d. Lithium

21. Which of the following anti platelet drugs acts by blocking ADP receptors

- a. Aspirin
- b. Ticagrelor
- c. Tirofiban
- d. Vorapaxar

22. Which of the following anti-rejection drugs is a mTOR inhibitor causing pancytopenia?

- a. Tacrolimus
- b. Everolimus
- c. Mycophenolate
- d. Azathioprine

23. A 60-year-old has chest pain on climbing 1 flight of stairs. Stress testing shows evidence of hibernating myocardium. Which of the following drugs is not useful for management of this patient?

- a. Metoprolol
- b. Ivabradine
- c. Isosorbide mononitrate
- d. Alteplase

24. A 32-year-old epileptic woman presents with flank pain and is found to have calcium phosphate kidney stones. Which of the following drugs is most likely responsible?

- a. Valproate
- b. Carbamazepine
- c. Topiramate
- d. Lamotrigine

25. Morphine increases the pain threshold by acting primarily on which opioid receptor subtype?

- a. Mu (μ) receptors – G-protein coupled inhibition of neurotransmitter release
- b. Kappa (κ) receptors – excitatory effect on pain fibers
- c. Delta (δ) receptors – enhancement of substance P release
- d. Sigma (σ) receptors – non-opioid receptor producing dysphoria

26. A 55-year-old man with type 2 diabetes mellitus is started on an SGLT2 inhibitor for improved glycemic control. Which of the following adverse effects is least likely to be associated with this drug class?

- a. Euglycemic ketoacidosis
- b. Increased risk of genital mycotic infections
- c. Hypoglycemia when used as monotherapy
- d. Increased risk of urinary tract infections

27. The 58-year-old man presents with acute decompensated heart failure, pulmonary edema, and respiratory distress. Which of the following drugs is not used in the management of acute heart failure?

- a. Furosemide
- b. Dobutamine
- c. Nitroglycerin
- d. Carvedilol

28. A 28-year-old woman treated with intravenous metoclopramide for nausea develops acute dystonia with involuntary upward eye deviation and neck muscle spasm. Which of the following is the most appropriate management?

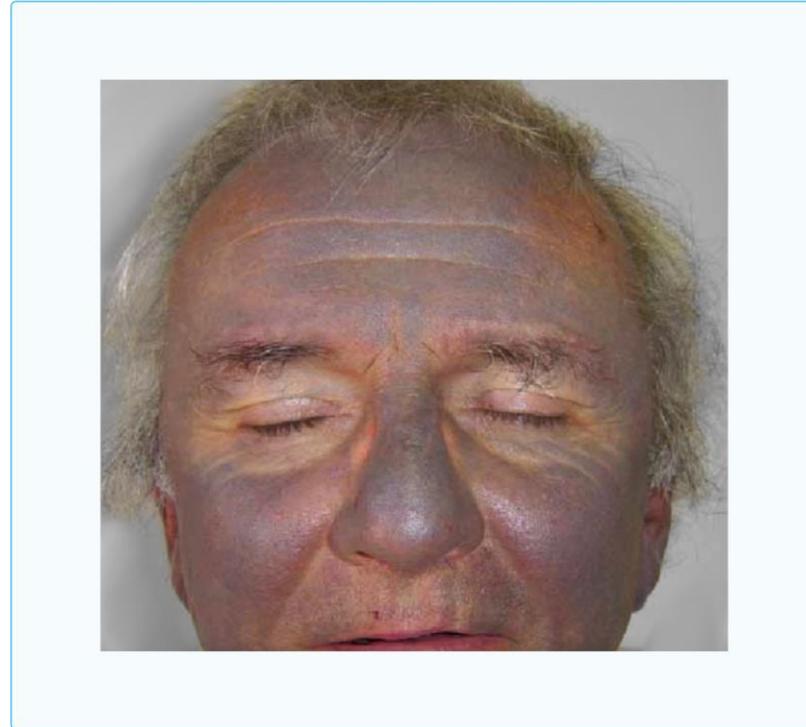
- a. Stop metoclopramide and give promethazine
- b. Continue metoclopramide and add ondansetron
- c. Stop metoclopramide and give haloperidol
- d. Continue metoclopramide and give metoprolol

29. Which of the following is COX-3 inhibitor?

- a. Paracetamol
- b. Diclofenac
- c. Tenoxicam
- d. Mefenamic acid

30. A 65-year-old man with ischemic cardiomyopathy is on medication that has resulted in this presentation. Which of the following is most likely to be seen in this patient

- a. Hyperthyroidism
- b. Pulmonary fibrosis
- c. Hypothyroidism
- d. Corneal microdeposits



31. After pre-treatment with an α -adrenergic blocker, adrenaline injection produces a fall in blood pressure instead of a rise. Which of the following statements is correct about it?

- a. Fall in blood pressure occurs because of β_2 -mediated vasoconstriction becomes unopposed once α -receptors are blocked
- b. Noradrenaline produces the same reversal since it also has strong β_2 activity
- c. Can be prevented if a β -blocker is given after α -blockade
- d. The phenomenon is mediated primarily through β_2 -receptors in coronary circulation, overriding the α -effects

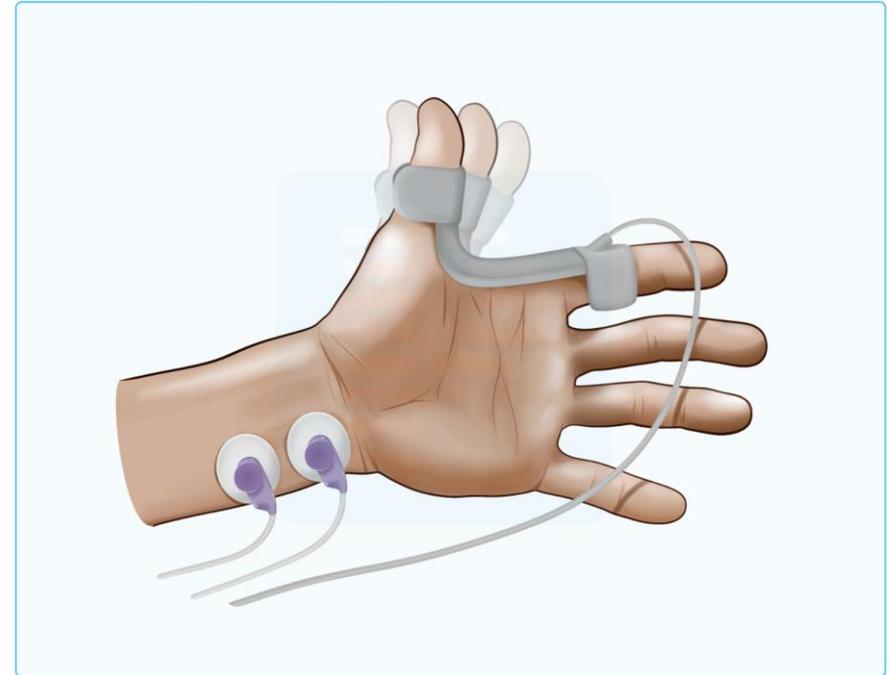
32. The following patch is used for which of the following patients?

- a. 10-year-old scheduled for bone marrow biopsy
- b. 40-year-old with breast cancer with spine metastasis
- c. 65-year-old undergone Total knee replacement
- d. 85-year-old man with chronic severe osteoarthritis knee pain, already on high-dose oral opioids



33. Which of the following is correct about the testing shown below?

- a. Assess neuromuscular irritability
- b. Assess patient can be extubated safely
- c. Assess patient can be intubated safely
- d. Assess Neuromuscular weakness due to autoantibodies



34. RANK Ligand inhibitor is used for management of which of the following

- a. Vitamin D resistant rickets
- b. Osteoporosis
- c. Chronic myeloid leukaemia
- d. Chronic myelomonocytic leukaemia

35. A 32-year-old male with schizophrenia on fluphenazine presents with marked restlessness, inability to sit still, and constant pacing. Which of the following is correct?

- a. Start benzhexol
- b. Start beta blocker
- c. Start diazepam
- d. Start dantrolene sodium

36. All of the following drugs cause agranulocytosis except?

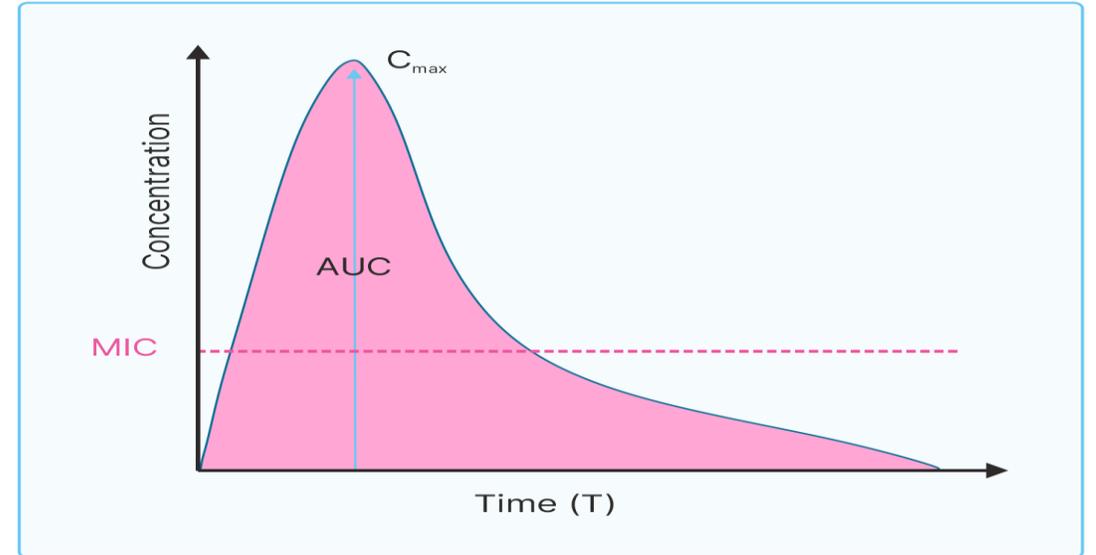
- a. Carbamazepine
- b. Clozapine
- c. Carbimazole
- d. Cotrimoxazole

37. The 5-year-old child consumed two bottles of strawberry flavoured paracetamol and became unconscious. Which of the following is toxic product responsible?

- a. N-acetyl-p-benzoquinone imine
- b. N-acetyl-cysteine
- c. Glutathione
- d. Glutathione sulphate

38. Which of the following is not correct about concentration dependent killing by antibiotics?

- a. Post antibiotics effect continues below MIC
- b. Concentration 10 times above MIC needed for optimal bactericidal effect
- c. Measure of efficacy is time above the MIC
- d. Exhibited by aminoglycosides used in UTI



39. Which of the following is not correct about neostigmine?

- a. Reversal of NMJ blockade
- b. Crosses the blood brain barrier
- c. Used in neonatal myasthenia gravis
- d. Relief of post operative paralytic ileus

40. You are managing a patient with reversible airway disease and have prescribed the following pressurized metered dose inhaler for management of acute exacerbations due to poor AQI. Which of the following is not a side effect of this drug?

- a. Hypoglycaemia
- b. Tachyphylaxis
- c. Hypokalemia
- d. Throat pain



41. A 45-year-old man is undergoing upper GI endoscopy. Which of the following drugs is most likely used?

- a. Thiopentone
- b. Ketamine
- c. Propofol
- d. Midazolam

42. A newborn delivered at term has midfacial hypoplasia, a flat nasal bridge, shortened limbs, and stippled epiphyses on X-ray (chondrodysplasia punctata). Which of the following drugs is most likely responsible?

- a. Warfarin
- b. Valproate
- c. Phenytoin
- d. Carbamazepine

43. A 70-year-old man with gait disturbance, urinary incontinence, and memory impairment is diagnosed with normal pressure hydrocephalus. Which drug of choice for this condition?

- a. Decrease plasma osmolarity
- b. Inhibits carbonic anhydrase in the choroid plexus
- c. Blocks aquaporin channels in the ependymal cells
- d. Enhances plasma osmolarity

44. Which of the following is not a side effect of thiazides?

- a. Hyperglycaemia
- b. Hyperlipidaemia
- c. Hyperuricemia
- d. Ototoxicity

45. Which of the following drugs reduces off phenomenon in patients diagnosed with Parkinson disease

- a. Safinamide
- b. Ropinirole
- c. Pramipexole
- d. Trihexyphenidyl

46. A 32-year-old man with a long history of manic–depressive psychosis is being treated with lithium carbonate. Over the last few months, he has developed excessive thirst and polyuria. Laboratory evaluation shows dilute urine with low specific gravity that does not respond to desmopressin administration. Which of the following drugs is the most appropriate for this patient?

- a. Hydrochlorothiazide
- b. Amiloride
- c. Indomethacin
- d. Desmopressin

47. The patient is started on a drug that acts by activating anti Thrombin III. What is the reversal antidote for this drug?

- a. Vitamin K
- b. Protamine sulphate
- c. Idarucizumab
- d. Andexanet alpha

48. Which of the following is an indirect factor X inhibitor?

- a. Fondaparinux
- b. Enoxaparin
- c. Dalteparin
- d. Apixaban

49. Gene that leads to methicillin resistant Staph aureus is

- a. mecA
- b. mecR1
- c. rpoB
- d. pncA

50. A 40-year-old farmer presents with a rapidly progressive painful swelling of the left leg after a contaminated crush injury. On examination, the limb is tense, edematous, crepitant, and shows bullae with foul-smelling serosanguinous discharge. The patient is toxic with tachycardia and hypotension. Imaging confirms extensive muscle necrosis and non-viable tissues. Which of the following is the most appropriate management in this case?

- a. Wound debridement + IV Penicillin + Hyperbaric oxygen
- b. Amputation of the limb + IV Penicillin + Hyperbaric oxygen therapy
- c. Conservative therapy with IV antibiotics only
- d. Conservative therapy with hyperbaric oxygen only

51. Most potent glucocorticoid drug is

- a. Hydrocortisone
- b. Dexamethasone
- c. Fludrocortisone
- d. Nandrolone

52. Person with allergy to penicillin should not receive which of the following antimicrobials

- a. Aminoglycosides
- b. Macrolides
- c. Cephalosporins
- d. Monobactams

53. Rationale for combining Cilastatin with imipenem is

- a. Inhibitor of dihydropeptidase in renal tubules
- b. Activates dihydropeptidase in renal tubules
- c. Synergistic combination with broad spectrum coverage
- d. Additive effect of Cilastatin

54. A 22-year-old man presents with a 3-day history of burning micturition and purulent urethral discharge. Gram stain of urethral smear shows Gram-negative intracellular diplococci. Which of the following is the recommended treatment for this infection?

- a. Ceftriaxone single intramuscular dose
- b. Azithromycin single oral dose
- c. Benzathine penicillin single does
- d. Ciprofloxacin single oral dose

55. Octreotide is used for management of all of the following except?

- a. Carcinoid crisis
- b. Acromegaly
- c. Osmotic diarrhoea
- d. Bleeding oesophageal varices

56. Which of the following is a fifth-generation cephalosporin

- a. Ceftaroline
- b. Cefuroxime
- c. Ceftazidime
- d. Ceftriaxone

57. The patient is M. Gravis is undergoing elective cholecystectomy under General anaesthesia. Which antimicrobial is not recommended for use in patient in post op care

- a. Aminoglycosides
- b. Beta lactams
- c. Cephalosporins
- d. Penicillin

58. Drug used for radical cure in malaria

- a. Chloroquine
- b. Primaquine
- c. Artesunate
- d. Chloroquine

59. First line drug used for management of CKD patients with Hb=7 gm/dl.

- a. Oral iron
- b. IV iron
- c. Darbepoetin
- d. Packed RBC

60. A 14-year-old boy with known sickle cell anemia presents with recurrent episodes of painful vaso-occlusive crises and has required multiple hospital admissions. Laboratory workup shows chronic hemolytic anemia. Which of the following drugs can reduce the frequency of painful crises by increasing fetal hemoglobin production?

- a. Iron supplementation
- b. Hydroxyurea
- c. Folic acid
- d. Erythropoietin

61. A 7-year-old boy with newly diagnosed Burkitt lymphoma is started on induction chemotherapy. Within 24 hours he develops oliguria, arrhythmia, and seizures. Laboratory results show:

Uric acid: 14 mg/dL

Potassium: 6.5 mEq/L

Phosphate: 8 mg/dL

Calcium: 6.5 mg/dL

Which of the following is the drug of choice for management of hyperuricemia in this patient with tumor lysis syndrome?

- a. Allopurinol
- b. Rasburicase
- c. Febuxostat
- d. Probenecid

62. A 55-year-old man with head and neck cancer is undergoing radiation therapy and is at risk of developing severe xerostomia due to salivary gland toxicity. Which of the following drugs is used as a cytoprotective agent in this setting?

- a. Mesna
- b. Amifostine
- c. Leucovorin
- d. Dexrazoxane

63. Which of the following will not cause hand and foot syndrome/palmoplantar Acro dysesthesia?

- a. Fluorouracil
- b. Capecitabine
- c. Liposomal doxorubicin
- d. Vincristine

64. A 45-year-old woman with chronic immune thrombocytopenic purpura (ITP) presents with recurrent episodes of mucosal bleeding and petechiae. Despite corticosteroids and IVIG therapy, her platelet counts remain very low. Which of the following agents, a recombinant IL-11 analogue that stimulates platelet production, can be used in her management?

- a. Filgrastim
- b. Oprelvekin
- c. Eltrombopag
- d. Romiplostim

65. 1mg of 1:10,000 epinephrine is used for management of which of the following

- a. Anaphylaxis
- b. Pulseless electrical activity
- c. Electromechanical dissociation
- d. AV dissociation

66. All of the following statements about Bedaquiline are correct, EXCEPT:

- a. It inhibits the c subunit of mycobacterial ATP synthase
- b. It is primarily metabolized in the kidney and excreted in urine
- c. It is bactericidal against MDR and XDR strains of *Mycobacterium tuberculosis*
- d. Its important adverse effects include QT prolongation and hepatotoxicity

67. Which of the following stages of evidence in trials or research is most reliable?

- a. Grade I
- b. Grade II
- c. Grade III
- d. Grade IV

68. Dosing and efficacy is evaluated in which stage of clinical trial ?

- a. Phase 1
- b. Phase 2
- c. Phase 3
- d. Phase 4

69. An asthmatic patient was well-controlled on salbutamol therapy presented with a history of migraine. He was started on propranolol for prophylaxis of migraine. Later the patient complained that his asthma attack was precipitated possibly due to propranolol. This type of antagonistic action is:

- a. Pharmacokinetic antagonist
- b. Pharmacological antagonist
- c. Chemical antagonist
- d. Physiological antagonist

70. Which of the following is true about inverse agonist:

- a. High affinity drug with no intrinsic activity
- b. Opposite affinity drug with opposite intrinsic activity
- c. High affinity drug with opposite intrinsic activity
- d. Opposite affinity drug with low intrinsic activity

71. A 50-year-old patient was presented with a red congested eye with pain. The ophthalmologist diagnosed as a case of glaucoma and prescribed him pilocarpine. What is site of action of this drug in this case?

- a. Radial muscle of iris
- b. Circular muscle of iris
- c. Smooth muscle of eyelids
- d. Seminal vesicle

72. In which of the following drugs therapeutic drug monitoring is recommended:

- a. Anti hypertensives in pregnancy
- b. Patient on ACT with cerebral malaria
- c. CHF patient on ACE inhibitor
- d. Depressed patient on TCA

73. True statement about loop diuretics:

- a. Act by blocking Na-Cl co transporter at loop of henle
- b. Act by blocking Na-K-2Cl co-transporter at DCT
- c. Preferred in patients with hypocalcemia
- d. Aspirin can blunt the diuretic effect of loop diuretics

74. A 55 year old patient was treated in emergency for arrhythmia. Later he developed neurological symptoms like paraesthesia, slurring of speech, light headedness and convulsion. Which of the following anti-arrhythmic could have caused such symptoms:

- a. Esmolol
- b. Landiolol
- c. Amiodarone
- d. Lidocaine

75. A 28-year-old man develops severe allergic rhinitis with sneezing, rhinorrhea, and itching of the nose during spring season. His physician prescribes a drug that acts as a selective H₁-histamine receptor antagonist, reducing the symptoms of allergy without causing significant sedation. Which of the following drugs is most likely responsible for this effect?

- a. Astemizole
- b. Fexofenadine
- c. Cetirizine
- d. Montelukast

THANK YOU