

1. James is a 50 year old type II diabetic and hypertensive patient whose sugar is well controlled. He has poor blood pressure control on Enalapril 20mg. His pulse is 102/minute. He has no features of heart failure which antihypertensive would you add to his treatment.
- (a) Nifedipine.
 - (b) Amlodipine.
 - (c) Nimodipine.
 - ✓---- (d) Verapamil.
 - (e) Losartan.
2. John, 40 years old is admitted with diabetes mellitus. His blood sugar is 19.mmol/L. His blood pressure is 144/92mmHg. He has ketonuria. What of the following is true concerning his condition:-
- (a) He should be given metformin and intravenous normal saline.
 - (b) His blood pressure is best controlled by a thiazide diuretic.
 - (c) He should be promptly treated with twice daily doses of 70/30 insulin mixture which contains 70% regular insulin and 30% intermediate acting insulin.
 - (d) If he has hypokalaemia, a bolus of 20mmol of potassium chloride should be given over 1 minute.
 - (e) His potassium level may continue to fall when he receives soluble insulin without potassium supplementation.
3. Amina presents with 10 days history of cough. She is producing mucoid sputum. She has arthralgia and headache. Her pulse is 78/minute and temperature is 37.8°C. Which would be the most appropriate empiric antibiotic:-
- (a) Ceftriaxone.
 - (b) Amoxicillin/clavulanic acid.
 - (c) Clarithromycin.
 - (d) Crystalline penicillin plus gentamicin.
 - (e) Linezolid.
4. Which is not true of management of HIV/tuberculosis coinfection:-
- (a) Efavirenz can be used as part of the treatment in patients on Rifampicin based therapy.
 - (b) Patients on boosted protease inhibitor should be preferentially treated with rifabutin.
 - (c) Levofloxacin should be added to the tuberculosis therapy if the patient is pregnant.
 - (d) Isoniazid may contribute to peripheral neuropathy in this patient.
 - (e) Both rifabutin and Ethambutol may cause eye complications.

5. Which is not used in treatment of hepatitis C:-

- (a) Lamivudine.
- (b) Interferon.
- (c) Ribavirin.
- (d) Sofosbuvir.
- (e) Simeprevir.

6. All the following are immunosuppressants except:-

- (a) Mycophenolate mofetil.
- (b) Levamisole.
- (c) Tacrolimus.
- (d) Cyclosporine.
- (e) Methylprednisolone.

7. Which is not antistaphylococcal:-

- (a) Linezolid.
- (b) Vancomycin.
- (c) Teicoplanin.
- (d) Cloxacillin.
- (e) Kanamycin.

8. Following a myocardial infarction, a patient is stabilized on warfarin. Which one of the following statements is accurate:-

- (a) Cholestyramine will increase prothrombin time.
- (b) Cimetidine is likely to decrease Prothrombin time.
- (c) Sulfonamides may enhance the effects of warfarin.
- (d) Vitamin K would restore Prothrombin time within 30 minutes.
- (e) If the patient takes aspirin, the dose of warfarin will need to be increased.

9. Which one of the following statements about management of patients with GIT ulcers is accurate:-

- (a) H₂ receptor blockers are as effective as proton pump inhibitors.
- (b) Antimicrobial regimens that eradicate helicobacter pylori are >98% effective in GIT ulcers.
- (c) Omeprazole is effective because it activates PGE₂ receptors.
- (d) Sulcralfate polymerizes in the gut, forming a protective coat over ulcer beds.
- (e) Steroids provide useful anti-inflammatory effects in GIT ulcers.

10. A patient with rheumatoid arthritis is being treated with a drug. He develops dizziness, tinnitus, blurred vision and puritus. Ocular examination reveals corneal deposits and retinal pigmentation. The drugs mostly likely prescribed is:-
- (a) Auranofin.
 - (b) Etanercept.
 - (c) Hydroxychloroquine.
 - (d) Methotrexate.
 - (e) Thioridazine.
11. A patient undergoing cancer chemotherapy has an increase in urinary frequency with much discomfort. Laboratory results include haematuria, mild leucopenia but no bacteriuria or crystalluria. The most likely drugs is:-
- (a) Cyclophosphamide.
 - (b) 5-fluorouracil.
 - (c) Methotrexate.
 - (d) Prednisone.
 - (e) Tamoxifen.
12. Which one of the following is approved for "ripening" of an unfavourable cervix at or near term in a pregnant patient:-
- (a) Alprostadil.
 - (b) Ergonovine.
 - (c) Dinoprostone.
 - (d) Terbutaline.
 - (e) Morphine.
13. The following are used in management of acute pain except:-
- (a) Opioids.
 - (b) Non-steroidal anti-inflammatory drugs.
 - (c) Acetaminophen.
 - (d) Nitrous oxide.
 - (e) Anticonvulsants.
14. Metoprolol is preferred over propranolol in heart failure because it:-
- (a) Causes less cardiopression.
 - (b) Is less likely to cause bronchoconstriction.
 - (c) Has both α and β adrenoceptor blocking effects.
 - (d) Is more effective as an antiarrhythmic.
 - (e) Has greater prophylactic value post myocardial infarction.

15. A 70 year old diabetic male patient is seen in casualty with a 2 hour history of crushing substernal chest pain radiating to the jaw. ECG shows ST segment elevation. The following are absolute contraindications to fibrinolytic therapy in this patient except:-
- (a) Aortic dissection.
 - (b) History of intracranial haemorrhage.
 - (c) Ischaemic stroke in the preceding 6 months.
 - (d) Transient ischaemic attack in the preceding 6 months
 - (e) Lumbar puncture in the past 24 hours.
16. The following antiplatelet agents inhibit the ADP receptor except:-
- (a) Clopidogrel.
 - (b) Ticagrelor.
 - (c) Tirofiban.
 - (d) Prasugrel.
 - (e) Ticlopidine.
17. Which of the following is the correct drug and dose used in emergency management of asystole:-
- (a) Epinephrine 0.1mg I.V every 3-5minutes.
 - (b) Vasopressin 20 I.V stat.
 - (c) Atropine 5mg I.V every 3-5minutes.
 - (d) Epinephrine 1mg I.V every 3-5minutes.
 - (e) Vasopressin 10u I.V start.
18. A 51 year old male with a 40 pack year history of cigarette smoking presents with progressively worsening dyspnoea over the past one year, associated with chronic cough and sputum production. Spirometry reveals an FEV_1/FVC ratio <0.70 and $FEV_1=60\%$ of the predicted. The following management strategies are indicated in this state of chronic obstructive pulmonary disease (COPD) except:-
- (a) Influenza vaccination.
 - (b) Short-acting bronchodilator when needed.
 - (c) Regular treatment with long-acting bronchodilator.
 - (d) Pulmonary rehabilitation.
 - (e) Inhaled glucocorticoids.
19. Which of the following agents is useful in management of nicotine addiction:-
- (a) Bupropion.
 - (b) Acamprosate.
 - (c) Naltrexone.
 - (d) Flumazenil.
 - (e) Disulfiram.

20. Which of the following disease modifying antirheumatic agent does not act via blockade of $\text{TNF-}\alpha$:-
- (a) Adalimumab.
 - (b) Etanercept.
 - (c) Certolizumab.
 - (d) **Tocilizumab.**
 - (e) Infliximab.
21. All the following agents are useful in management of gastroparesis due to autonomic neuropathy in diabetic patients except:-
- (a) Domperidone.
 - (b) Metoclopramide.
 - (c) Cisapride.
 - (d) Erythromycin.
 - (e) **Octreotide.**
22. Which statement is false regarding dextran:-
- (a) Is a polysaccharide.
 - (b) **May plug renal tubules precipitating acute renal failure.**
 - (c) **Increases coagulation factor VIII.**
 - (d) May cause anaphylactic reactions.
 - (e) Duration of effect is 6-12 hours.
23. True regarding Tamoxifen except:-
- (a) Is a selective estrogen receptor modulator.
 - (b) Lowers LDLn-cholesterol.
 - (c) **Has beneficial effect on bone.**
 - (d) **Reduces risk of uterine cancer.**
 - (e) Increases risk of venous thrombosis.
24. One of the following pairs of drugs is antagonistic:-
- (a) Warfarin/Aspirin.
 - (b) **Tricyclic antidepressant/Guanethidine.**
 - (c) Aminoglycosides/penicillins.
 - (d) Cyclosporine/aminoglycoside.
 - (e) Trimethoprim/sulfamethoxazole.

25. The following foods may interact with mono amine oxidase inhibitors (MAOIs) except:-

- (a) Oranges.
- (b) Tomatoes.
- (c) Yoghurt.
- (d) Pears.
- (e) Avocado.

26. One of the following is not a common cause of adverse drug reactions:-

- (a) Inadequate safety evaluation.
- (b) Extremes of age (elderly and neonates).
- (c) Over nutrition.
- (d) Intrinsic toxicity of the drug.
- (e) Drug interactions.

27. True regarding cutaneous absorption of drugs except:-

- (a) The face is far more permeable than the fore arm and may require less drug for equivalent effect.
- (b) Absorption from the palm is comparable to that of the fore arm.
- (c) Increasing concentration gradient increases mass transferred per unit time.
- (d) Absorption is rapid in regions with numerous hair follicles.
- (e) Occlusion retards absorption.

28. The following are more likely to occur in patients with renal impairment except:-

- (a) Calcitriol levels are likely to be higher than calcidiol levels.
- (b) Insulin requirements may decline.
- (c) Serum concentration of unbound drug may increase.
- (d) There may be irregular GIT absorption.
- (e) There may be anomalies V_d .

29. True regarding geriatric pharmacology except:-

- (a) The decline in renal blood flow, glomerular filtration and tubular secretion (with age) is signaled by an increase in serum creatinine.
- (b) Metabolic inactivation of drugs is slower.
- (c) Bioavailability of drugs that undergo 1st pass metabolism is increased.
- (d) Drugs acting on the CNS produce an exaggerated response.
- (e) Baroreceptor sensitivity is decreased leading to orthostatic hypotension with drugs that reduce blood pressure.

30. True about the management of a poisoned patient except:-
- (a) If volume expanders do not cause a rise in TBP or if fluid overload occurs, a bolus IV injection of Dobutamine must be administered.
 - (b) If convulsions are not managed by diazepam or chloramphenicol, the patient should be anaesthetized and treated with neuro-muscular blocking drugs and assisted ventilation.
 - (c) Supraventricular arrhythmias may not need treatment.
 - (d) Emesis may be induced in patients with normal cough reflex.
 - (e) Gastric lavage should be done if the patient had taken petroleum products.
31. _____ is a mutant form of tPA with similar pharmacokinetic and pharmacodynamic profile:-
- (a) Alteplase.
 - (b) Reteplase.
 - (c) Tenecteplase.
 - (d) Anistreplase.
 - (e) Urokinase.
32. True of nitroglycerin except:-
- (a) Both arteries and veins are dilated.
 - (b) Arterioles and precapillary sphincters are less dilated than the bigger vessels.
 - (c) Is beneficial in treatment of congestive cardiac failure.
 - (d) Cause clinically important relaxation of GIT smooth muscles.
 - (e) Decreases platelet aggregation.
33. Which of the following anti-epileptics tends to worsen myoclonus:-
- (a) Sodium valproate.
 - (b) Clonazepam.
 - (c) Lamotrigine.
 - (d) Phenytoin.
 - (e) Zonisamide.
34. The most ideal insulin preparation for treatment of diabetic ketoacidosis as currently recommended is:-
- (a) Soluble insulin.
 - (b) Insulin lispro.
 - (c) Insulin detemir.
 - (d) Humulin 70/30 mixtard.
 - (e) A combination of regular insulin and insulin glargine.

35. The most feared complication of parenteral nutrition is:-

- (a) Anaphylaxis due to lipovenous.
- (b) Disseminated intravascular coagulation.
- (c) Fatty liver.
- (d) Intractable fever.
- (e) Sepsis.

36. Which of the following alternative medicines is confirmed as effective in treatment of BPH:-

- (a) Ginkgo biloba.
- (b) Garlic.
- (c) St. John's wort.
- (d) Jaw plametto.
- (e) Coenzyme Q.

37. The most effective treatment for multiple sclerosis as currently recommended is:-

- (a) Plasmapheresis.
- (b) Steroids.
- (c) Azathioprine.
- (d) A combination of steroids and a cytotoxic agent.
- (e) Glatiramer.

38. A drug effective in the majority of cases of alzheimers disease is:-

- (a) Donezepil.
- (b) Rivastigmine.
- (c) Memantine.
- (d) Tacrine.
- (e) None of the above.

39. The following are true of Tenofovir (TDF) except:-

- (a) Causes osteomalacia.
- (b) TDF discontinuation may cause exacerbation of hepatitis.
- (c) Renal function tests should be performed every 2 months.
- (d) The risk of renal dysfunction increases with longer duration of therapy.
- (e) Is one of the first line HIV drugs in Kenya.

40. The following are features of mitochondrial toxicity caused by non nucleoside reverse transcriptase inhibitors except:-
- (a) Lactic acidosis.
 - (b) Peripheral neuropathy.
 - (c) Anemia.
 - (d) Diarrhoea.
 - (e) Pancreatitis.
41. True of metformin except:-
- (a) Is an oral preparation.
 - (b) It reduces hepatic glucose production.
 - (c) Causes hypoglycemia.
 - (d) Causes nausea.
 - (e) Is contraindicated in renal impairment.
42. Concerning treatment of hepatic encephalopathy, the following are true except:-
- (a) Restriction of dietary protein is always necessary.
 - (b) Precipitating factors should be corrected.
 - (c) Lactulose promotes elimination of nitrogenous products in the gut
 - (d) The goal of Lactulose therapy is to promote 2-3 soft stools per day.
 - (e) Neomycin is used.
43. The following are true in a patient with a severe asthmatic attack:-
- (a) Inhaled short acting beta agonists : 4 puffs every 20 minutes for the first hour.
 - (b) Prednisolone is used.
 - (c) Oxygen if there is hypoxemia.
 - (d) Combination of inhaled short acting beta agonists and anticholinergic agents is antagonistic.
 - (e) Anti histamines have no role.
44. The following are true statements in treatment of hypothyroidism:-
- (a) Thyroxine dose is adjusted by using thyroid stimulating hormone (TSH) levels.
 - (b) TSH levels should be measured every 2 months.
 - (c) Clinical response occurs within 1 week.
 - (d) Intravenous thyroxine is used in myxedema coma.
 - (e) Thyroxine is indicated in congenital hypothyroidism even in the absence of symptoms.

45. True of propylthiouracil except:-

- (a) It inhibits thyroid peroxidase.
- (b) In the titration regime, propylthiouracil is combined with thyroxine.
- (c) Causes euthyroidism is 6-8 weeks.
- (d) There is cross hypersensitivity between propylthiouracil and carbimazole.
- (e) Is indicated in thyrotoxic crisis.

46. The following antidotes work through competitive antagonism of the drugs indicated except

- (a) Flumazenil; Diazepam
- (b) Physostigmine; Atropine
- (c) Naloxone; Heroin
- (d) Glucagon; propranolol
- (e) Oxygen; Carbon monoxide

47. The following are recommended for empiric therapy of patients with severe, late-onset health care associated pneumonia except:

- (a) Amikacin
- (b) Tazobactam/piperacillin
- (c) Meropenem
- (d) Ceftriaxone
- (e) Levofloxacin

48. The following anti-tuberculous drugs should be avoided in patients with severe hepatic disease except:

- (a) Isoniazid
- (b) Pyrazinamide
- (c) Rifampin
- (d) Rifapentine
- (e) Ethambutol

49. True of Febuxostat in the treatment of gout & hyperuricemia except:

- (a) It is a more effective hypouricemic drug than allopurinol
- (b) Requires dosage adjustment in patients with renal impairment
- (c) Frequently causes headache
- (d) Is a non-purine inhibitor of xanthine oxidase
- (e) Is well tolerated in patients with a history of allopurinol Intolerance

50. The following drugs are effective in the treatment of secretory diarrhea except:

- (a) Calcium polycarbophil
- (b) Bismuth subsalicylate
- (c) Octreotide
- (d) Clonidine
- (e) Diphenoxylate