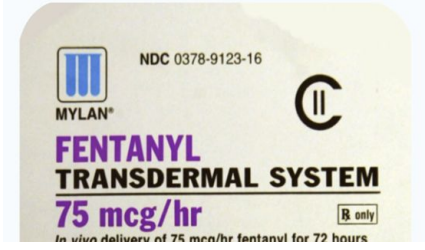
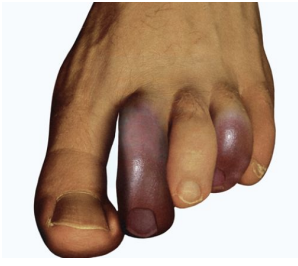
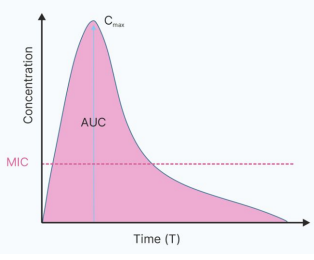
PHARMACOLOGY







no overthinking.... only logic!

1. A 50-year-old smoker patient has had chest pain on climbing stairs for the past 2 weeks. Work up shows normal cardiac biomarkers with resting baseline ECG being normal. Cardiac stress testing shows reversible ischemia. Which of the following drug is major mortality reducing in this patient

a. ACEI

b. Beta blocker

c. SGLT-2 inhibitor

d. Statins

CHF HFrEF

HF, DM & ASCVD

Chronic stable angina

* PLAQUE
* LDLc ↑

* HFrEF, HFEF = ARNi
* DM + CHF = SGLT2i : salt loss
* DM + ASCVD = GLP1RA
* CSA = Statin, low dose ACEi

2. A 28-year-old man returns from a forest area with high-grade fever, altered sensorium, and repeated vomiting. On examination, he is drowsy with icterus and hypotension. Peripheral smear is shown below. Laboratory investigations reveal metabolic acidosis and elevated serum creatinine. Which of the following is the most appropriate initial treatment?

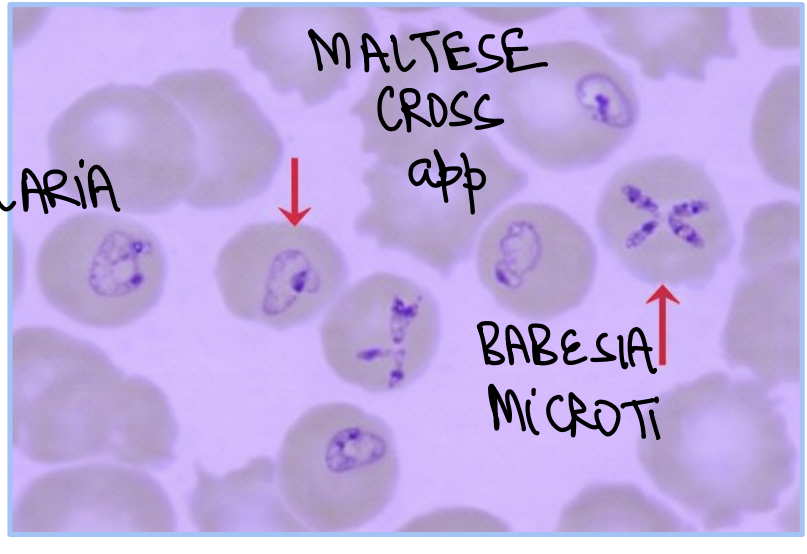
a. Oral chloroquine

b. Oral artemether-lumefantrine

c. IV artesunate

d. IV quinine + IV clindamycin

CEREBRAL MALARIA



3. 50-year-old hypertensive is diagnosed with aortic dissection based on CTA report. Which of the following is the best medical management of this case?

a. Non selective Alpha blocker followed by Cardio selective beta blocker

b. Cardioselective Beta blocker followed by non-selective alpha blocker

c. Sodium nitroprusside followed by Cardio selective beta blocker

d. Cardioselective Beta blocker followed by sodium nitroprusside

* TOC Type A Sx

* TOC Type B medical Mx

VD: Reflex Tachycardia : TEAR +++

pheochN = α + β

WE = Thiamine + DEXTROSE

Aortic D = β + SNP or labetalol α + β_1

4. You have started this drug shown below in a newly diagnosed case of stage IV carcinoma breast with metastasis to lumbar spine and radicular pain in both legs. Which of the following is correct about this drug and its mode of delivery?

a. Acts on u receptors ✓

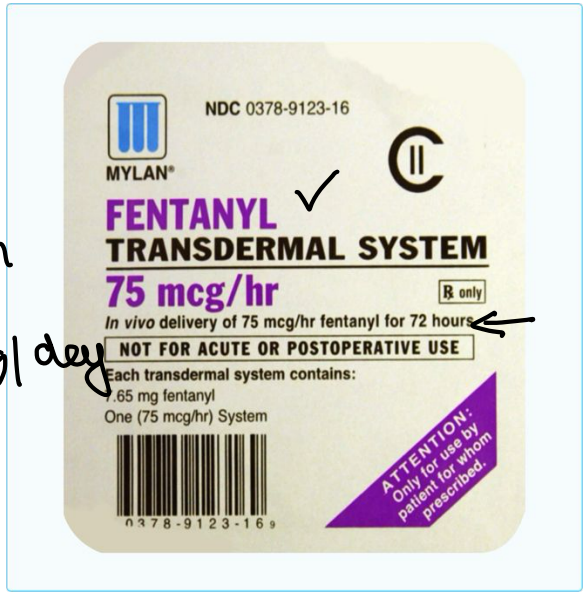
b. Preferably used in opioid naïve patients ✗ Tolerant

c. Replaced every 72 hours ✓

d. Cause wooden chest wall syndrome iv infusion

1. a,c
2. a,b,c
3. a,c,d
4. a,b,c,d

✗ oral morphine : > 60 mg/ day
Symptoms +



Pentazocine

Effect	μ (Mu0 *	K (kappa)	δ (delta)
Analgesia	Strong (supraspinal + spinal)	Moderate (mainly spinal0	Mild to moderate
Respiratory depression	Marked	Minimal	Minimal
Mood effect	Euphoria	Dysphoria	Modulatory / mild effect

	Partial μ agonist with ceiling respiratory depression

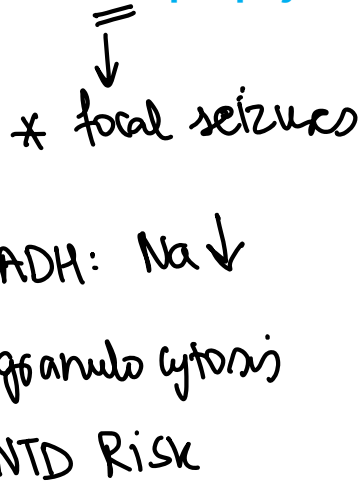
5. A newborn delivered at term has cleft lip with nail hypoplasia. Back examination shows a meningocele. Child is born to a mother who had poor obstetric history with recurrent abortions and temporal lobe epilepsy. Which of the following drugs is most likely responsible?

a. Lamotrigine

b. Phenytoin

c. Warfarin

d. Carbamazepine



6. A 68-year-old man with Parkinson disease is on levodopa–carbidopa for last decade. His son reports sudden, unpredictable episodes of rigidity and inability to move despite adherence to medication. These "OFF" episodes occur multiple times a day and last 60 minutes. Which of the following drugs works via non dopaminergic pathway to reduce indirect pathway overactivity?

a. Safinamide

b. Istradefylline — A_{2A} receptor antagonist → off period

c. Opicapone — COMT⊖: ↑ duration of action L1

d. Apomorphine

1. apomorphine SC injection
2. safinamide MAO-B
3. istradefylline

✓ Adenosine: A_2: FREEZE

✓ dopamine: D_2: MOVE

→ peak dose dyskinesia

AMANTADINE

7. A 30-year-old female patient presented with palpitations and dizziness. BP 100/60 mm Hg. On order of physician nurse gives a drug X which terminated this arrhythmia. Which of the following is correct about mechanism of action drug X used for acute management of this condition?

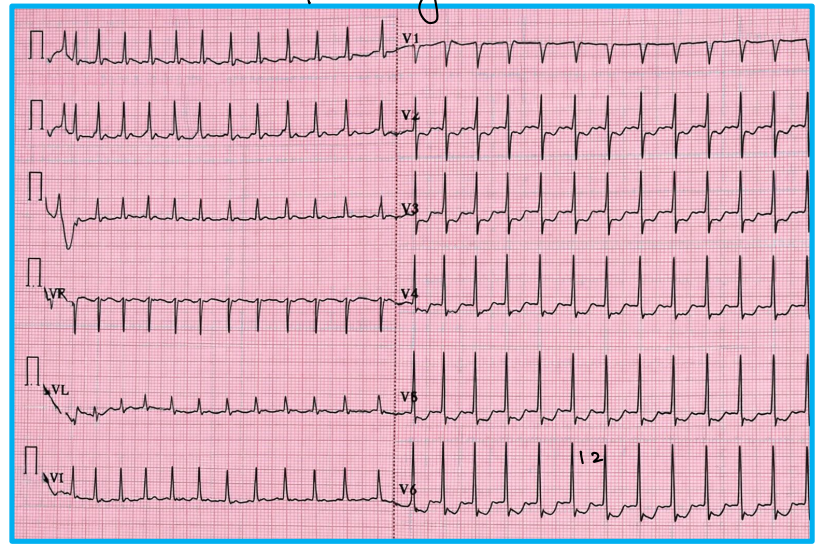
↑ refractory PERIOD

a. Gi protein coupled receptors and opens potassium channels

b. Gs protein coupled receptors and opens potassium channels

c. Gi protein coupled receptors and closes potassium channels

d. Gs protein coupled receptors and closes potassium channels

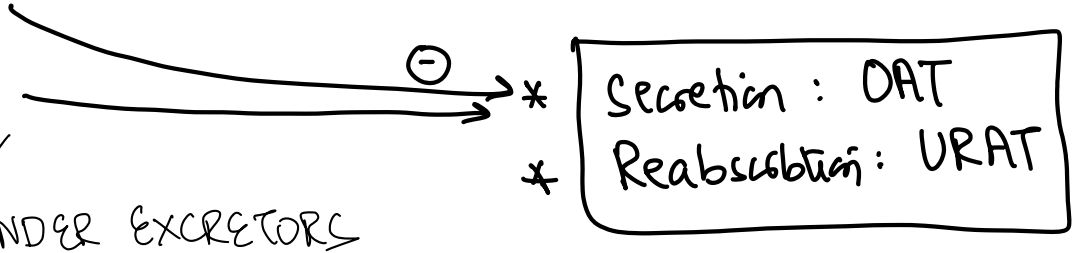


PSVT narrow QRS
HR: 150/min

8. Which of the following drugs can precipitate gouty arthritis?

1. Ethambutol ✓
2. Pyrazinamide ✓
3. Low dose aspirin ✓
4. Probenecid

UNDER EXCRETORS

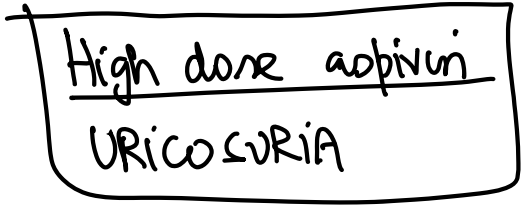


a. 1,3,4

b. 1,2,3

c. 2,3,4

d. 1,2,3,4



esophageal Candida

9. 34-year-old male with known HIV infection (CD4 count 70 cells/mm^3) presents with progressive odynophagia, retrosternal pain, and difficulty swallowing for 10 days. He has oral thrush on examination. Upper GI endoscopy shows multiple linear, shallow ulcerations in the mid and distal esophagus with surrounding erythema. He is started on iv fluconazole. Which is correct about it?

a. Inhibits fungal 14-α-demethylase and block production of ergosterol — Fungistatic

b. Binds to ergosterol and forms transmembrane pores — AMPHO-B

c. Inhibits β-(1,3)-D-glucan synthase ← Echinocandin

d. Inhibits squalene epoxidase ← TERFINABINE

CANDIDIASIS ORAL: Nystatin Lozenges

" esophageal / Bronchial: fluconozole iv

Invasive candidemia: candida albicans

* ICU: ANC ↓ < 500 cells/cu.mm =
  - (Inv:) β 1,3 glucan Test
  - Rx: – Echinocandin: micafungin

* Candida AURIS: No Rx available

Aspergillus

Invasive Aspergillome

* Cavity: fungal ball
* COVID-19: Hemoptysis
* HRCT: HALO SIGN
* BAL: ⊀ septate hyphae acute L

VORICONAZOLE
POSCONAZOLE

ABPA

asthma, CF
black sputum plugs
HRCT: CENTRAL Bronchiectasis
Rx: STEROIDS + ITRACONAZOLE

- **B** → Amphotericin B (binds ergosterol → pore formation)
- **C** → Caspofungin (echinocandin; cell wall inhibition)
- **D** → Terbinafine (allylamine; inhibits squalene epoxidase

10. A 52-year-old man undergoing induction chemotherapy for acute leukemia presents with persistent high-grade fever for 6 days despite broad-spectrum antibiotics. He is tachycardic and hypotensive. Labs TLC of 700 cells/mm³, Absolute neutrophil count: 120 cells/mm³, Platelet count: 38,000/mm³ with elevated serum lactate. Blood cultures are suggestive of Candida species, and the patient is diagnosed with fungal sepsis in the setting of febrile neutropenia. Which of the following is the most appropriate initial antifungal therapy?

a. IV Fluconazole

b. IV Caspofungin

c. IV Terbinafine

d. IV LAMB

↓

MUCORMYCOSIS
KALA AZAR
CRYPTOCOCCAL M

Invasive Candida
fungal sepsis
↓
Echinocandin
β 1,3 glucan synthase
- Micafungin
- Caspofungin

11. A 58-year-old man with type 2 DM and CKD is admitted with nausea, vomiting, abdominal pain, and rapid breathing for 1 day. He recently underwent minor surgery and was fasting for prolonged periods. His medications include metformin and a newly added oral antidiabetic drug started 2 months ago.
Investigations: Blood glucose: 168 mg/dL, HCO3: 14 mEq/L, pH: 7.24, pCO2 =29 mm Hg urine ketones: Positive, Anion gap: 16 meq/L.Which of the following drugs is most likely responsible for this presentation?

a. Sitagliptin

b. Empagliflozin

c. Pioglitazone

d. Glimepiride

Euglycemic D.K.A

SGLT2i

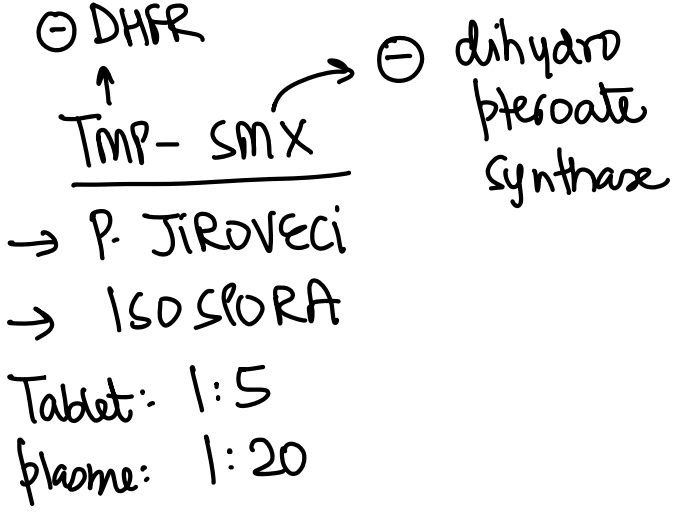
12. Optimal ratio for synergistic antibacterial action of trimethoprim and Sulfamethoxazole in the plasma is?

a. 1:5

b. 1:10

c. 1:20

d. 1:100



13. A 45-year-old woman presents with recurrent nausea episodes with brief episodes of vertigo triggered by turning her head to one side. She denies nausea during travel or spinning sensation while reading in a moving car. Which of the following is the most appropriate pharmacological option for her condition?

a. Scopolamine patch
b. Tradipitant
c. Betahistine
d. Meclizine

Motion sickness

MENIERE

BPPV → Epley maneuver

motion sickness X

H_1 receptor ⊕: vestibular nuclei

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

a. Colitis associated with clostridium difficile in 60 years man

b. Bacterial meningitis in man aged 30 years ✓

c. Bacterial meningitis in child aged 3 years ✓

d. Methicillin sensitive staph aureus carbuncle in 20-year-old man

1. a,b,d

2. a,b,c

3. b,c,d

4. a,b,c,d

PMC

> 3mths to < 55yr

ceftriaxone + Vancomycin

allopurinol

URIC ACID +

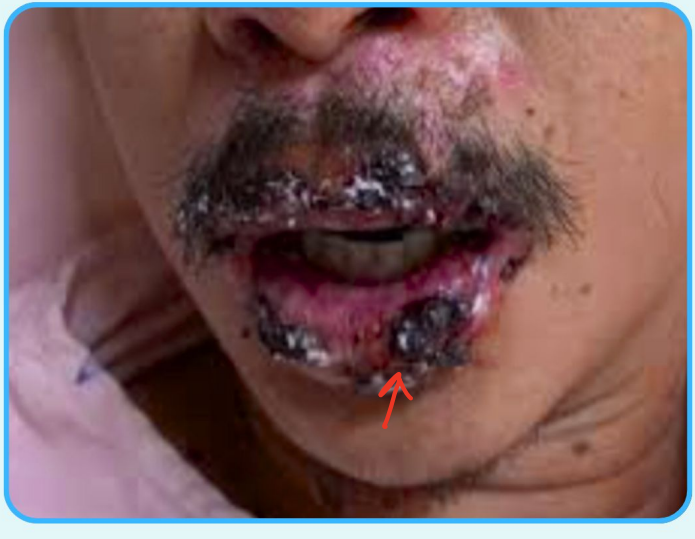
15. A 48-year-old man with kidney stones and tophi is started on drug X. Ten days later, he develops high-grade fever, generalized erythematous rash with mucosal involvement and following lesions shown below. Which of the following testing should have been screened before initiating therapy?

a. HLA-B27 A·S

b. HLA-B57:01

c. HLA-B*58:01

d. HLA-B15:02



Hemorrhagic CRUSTING lips SJS

16. A 62-year-old man with Parkinson disease on long-term levodopa–carbidopa therapy develops abnormal choreiform movements involving the face and upper limbs. Which of the following drugs is most appropriate to reduce this complication?

a. Benzhexol

b. Benztropine

c. Bromocriptine

d. Amantadine

↓PEAK dose dyskinesia

NMDA receptors: ↓ glutamate levels

Amantadine will reduce glutamate by NMDA receptor blockage and cause reduction of involuntary choreiform movements

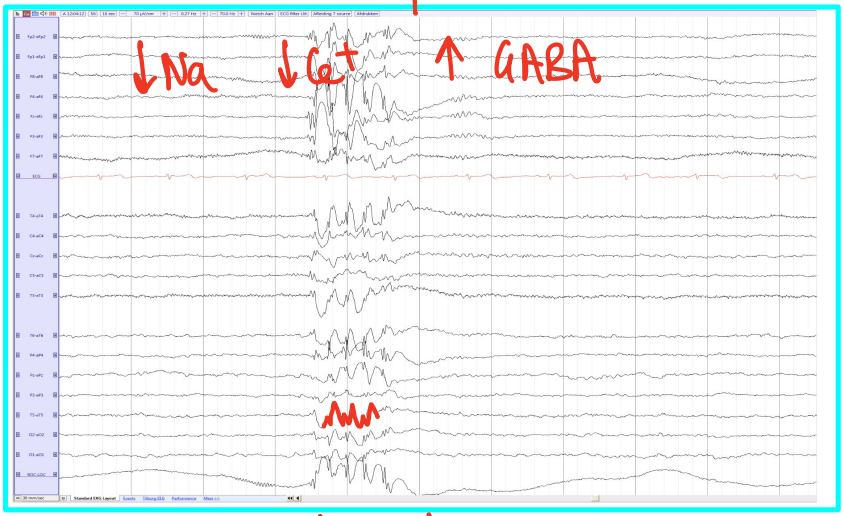
myoclonic seizures

17. A 8-year-old child has poor school performance and brief shock like jerky movement of hands causing dropping of toothbrush and break fast food items. Which drug will be started in this child?

valproate

a. Thalamic T calcium channel inhibitor ✓
b. Inhibit GABA transaminase ✓
c. Inhibitor of voltage dependant sodium channels ✓
d. NMDA glutamate receptor inhibitor

1. a, b
2. a, b, c
3. b, c, d
4. a, c, d



4-6 Hz
polyspike

bleed in plaque : fragmentation of plaque

18. A 70-year-old man is started on warfarin for atrial fibrillation develops painful purple discoloration of his toes 4 weeks with palpable peripheral pulses. What is the most likely underlying mechanism?

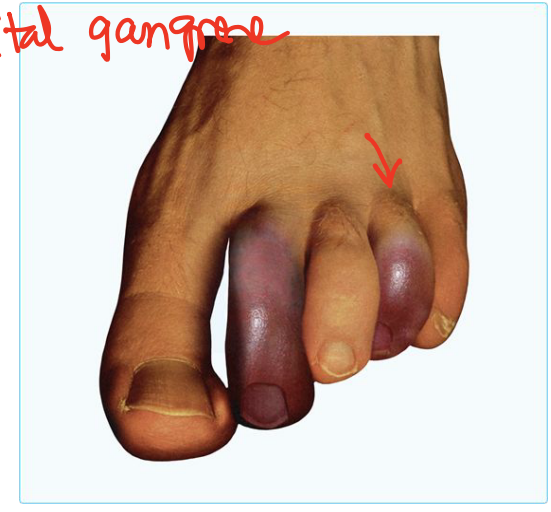
a. Protein C deficiency–induced thrombosis

b. Immune complex vasculitis

c. Heparin-induced thrombocytopenia

d. Cholesterol crystal microembolization

digital gangrene



19. Which of the following drugs can cause passage of green colour urine?

a. Deferoxamine → Pink urine

b. Triamterene

c. Dapsone → Red brown Tears, urine

d. Doxycycline

& Orange urine

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

a. Aspirin

b. Ticagrelor

c. Tirofiban

d. Vorapaxar

COX-1 ⊖ , ⊖ TxA_2

⊖ ADP Receptors

D.A.P.T

1. T.I.A
2. MI

Aspirin	Irreversibly inhibits COX – 1 →↓ TXA2 →↓ platelet aggregation
Clopidogrel	Irreversibly blocks ADP (P2Y12) receptor
Prasugrel	More potent irreversible P2Y12 inhibitor
Ticagrelor	Reversible P2Y12 inhibitor
Abciximab	Blocks GP Iib/IIIa receptor →prevents fibrinogen binding
Eptifibatide	Reversible GP Iib/IIIa inhibitor
Tirofiban	Reversible GP Iib/IIIa inhibitor
Dipyridamole	Inhibits PDE →↑cAMP in platelets
Cilostazol	PDE3 inhibitor →↑cAMP →vasodilation + Antiplatelet
Vorapaxar	Blocks thrombin (PAR – 1) receptor

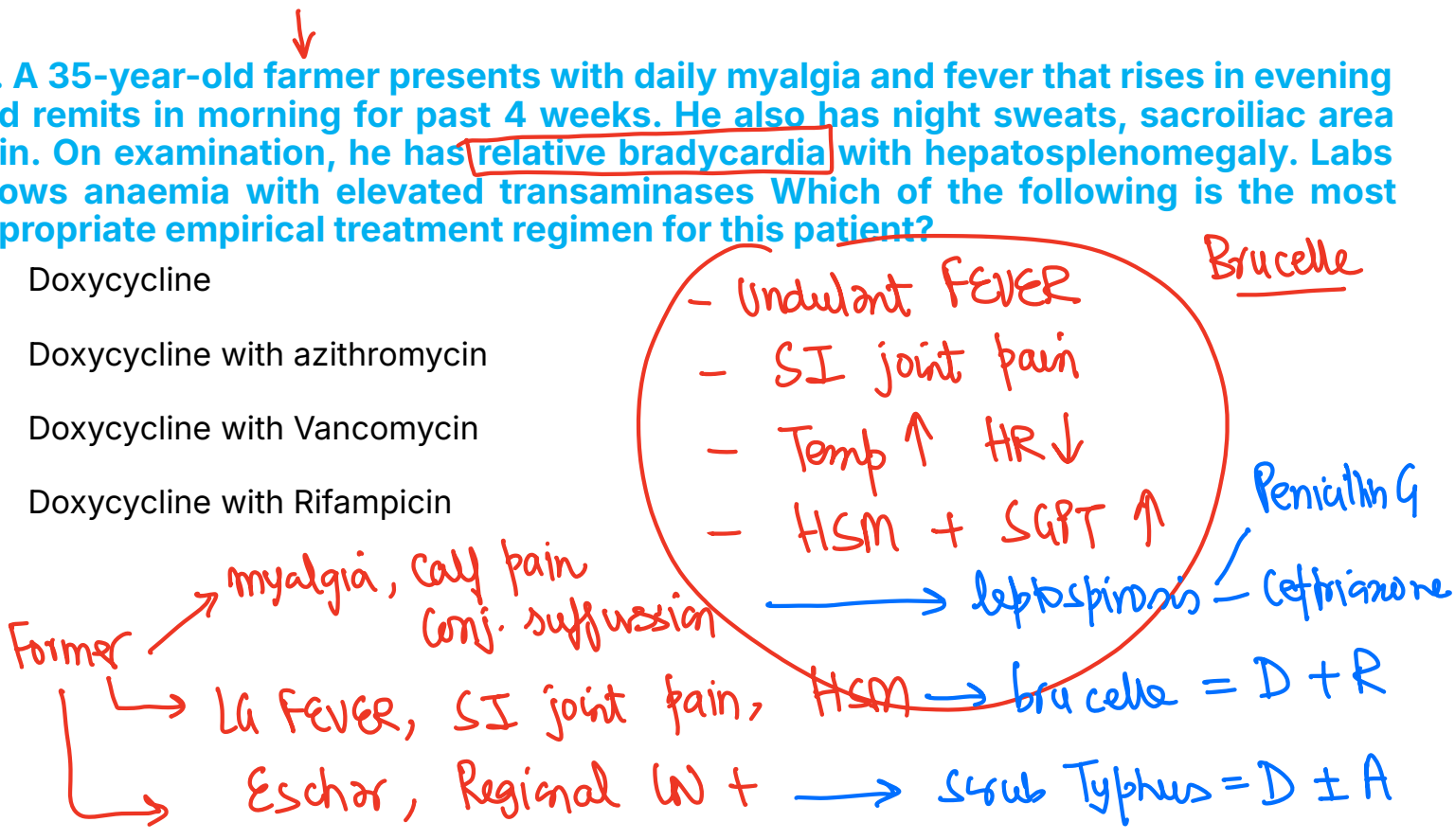
21. A 35-year-old farmer presents with daily myalgia and fever that rises in evening and remits in morning for past 4 weeks. He also has night sweats, sacroiliac area pain. On examination, he has relative bradycardia with hepatosplenomegaly. Labs shows anaemia with elevated transaminases Which of the following is the most appropriate empirical treatment regimen for this patient?

a. Doxycycline

b. Doxycycline with azithromycin

c. Doxycycline with Vancomycin

d. Doxycycline with Rifampicin



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

a. Tacrolimus → CALCINEURIN : ⊖

b. Everolimus

c. Mycophenolate → ⊖ IMP dehydrogenase

d. Azathioprine → Purine analog

mTOR : ⊖ : ⊖ IL-2 mediated T cell proliferation

↳ Rapamycin

23. A 29-year-old IT worker presents with sudden onset fever, headache, vomiting, and petechial rash. CSF Gram stain shows gram-negative diplococci. Which of the following is the recommended chemoprophylaxis for his wife who is pregnant?

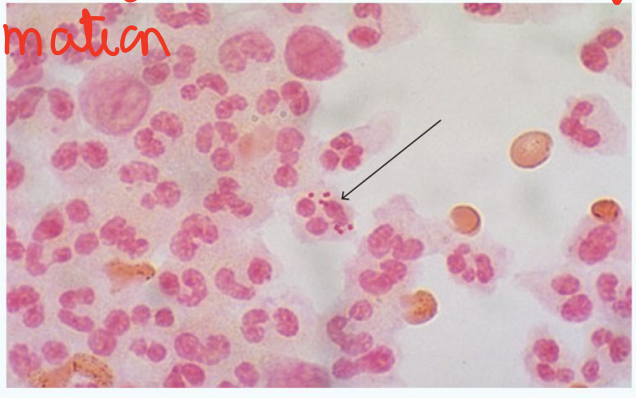
a. Ceftriaxone

b. Ciprofloxacin ⊖ cartilage formation

c. Rifampicin

d. Ceftriaxone with Vancomycin

N. meningitidis



VONOPRAZAN: PCAB

24. A 48-year-old man with peptic ulcer disease is started on a novel acid-suppressing drug that acts by reversibly competing with potassium at the gastric H^+/K^+ ATPase pump. Which of the following statements about this drug class is true?

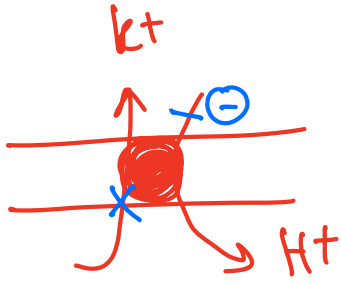
a. Require acidic activation in parietal cell canaliculi before action

b. Provide faster and more sustained acid suppression than PPIs

c. Irreversibly inhibit the proton pump for 24–48 hours

d. Slow onset of action

a, c, d ⇒ PPI
b ⇒ PCAB



25. A 60-year-old smoker man is diagnosed with chronic stable angina. His resting heart rate is 90/min in sinus rhythm and you have started him on tiotropium + Indacaterol for wheezing symptoms. Which of the following is the most appropriate drug to control his angina symptoms?

a. Metoprolol

b. Isosorbide mononitrate

c. Amlodipine

d. Ivabradine

CAD + COPD

Metoprolol : ☹

CCB: reflex Tachycardia

CSA

1. low dose aspirin
2. Statin
3. Isosorbide mononitrate
4. S.L NTG
5. Ivabradine / Metoprolol
6. Ranolazine

26.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

Zoni & Topi causes Renal colic !

glaucome : AED

- ✓ SIADH: Na↓
- ✓ agranulocytosis
- ✓ NTD

27. 32-year-old male developed spastic paraplegia after a T4 spinal cord trauma. All of the following drugs are commonly used in the management of his spasticity except:

a. Baclofen ✓

b. Tizanidine ✓

c. Diazepam ✓

d. Dantrolene → Malignant Temp ↑ > 40.5°C, NMS

TIRZEPATIDE

28. A 55-year-old man with type 2 diabetes mellitus is started on an dual GIP and GLP-1 agonist once a week for obesity. Which of the following are side effects of this drug

a. Pancreatitis ✓

b. Gall bladder stasis

c. Risk of MTC in rodents ✓

d. Vision change ✓

wt ↓ : GB sludge

BLACK BOX- Warning

1. a, b, c

2. b, c, d

3. a, c, d

4. a, b, c, d

29. 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

β BLOCKERS CI

Acute HF

- A: Acute pulm edema
- B: Bronchial A: exacerbation
  Bradycardia
- C: COPD "
- P: Prinzimetal A, PAD

30. 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

Anti cholinergic effect

Dopamine ↓ | Ach ↑

acute dystonia

Oculogyric crisis

31. 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

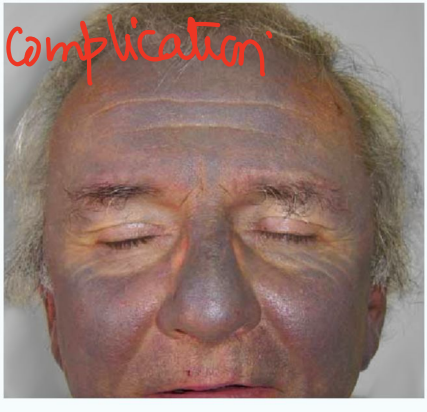
b. Pulmonary fibrosis

c. Hypothyroidism

d. Corneal microdeposits

Most serious complication

(MC)



DALE VASOMOTOR Reversal

32. 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. Unopposed β_2-mediated vasodilation in peripheral vessels after α-blockade

d. Phenomenon is mediated primarily through β_2-receptors in coronary circulation, overriding the α-effects

α_1: VC: ↑BP

β_1: HR↑: ↑BP

β_2: VD (skeletal muscle) BP ↓↓

DENOSUMAB

33. 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

(-) OSTEOCLASTS activity

Biophosphonates: — Bone Resorbtion

once/yr: IV injection: Zolendronate

34. 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

* AKATHASIA : PRPNL

* Rabbit syn → Benzhexol

* Tardive dyskinesia
  ↳ Tetrabenazine
  Valbenazine

35. All of the following drugs cause agranulocytosis except?

a. Carbamazepine

b. Clozapine

c. Carbimazole

d. Cotrimoxazole

TLC ↓

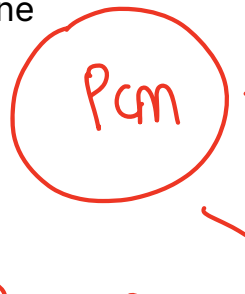
36. The 5-year-old child consumed two bottles of strawberry flavoured paracetamol and became unconscious. Which of the following is toxic product responsible?

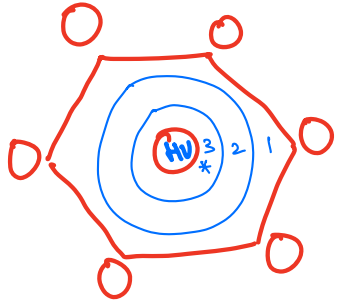
a. N-acetyl-p-benzoquinone imine

b. N-acetyl-cysteine

c. Glutathione

d. Glutathione sulphate





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

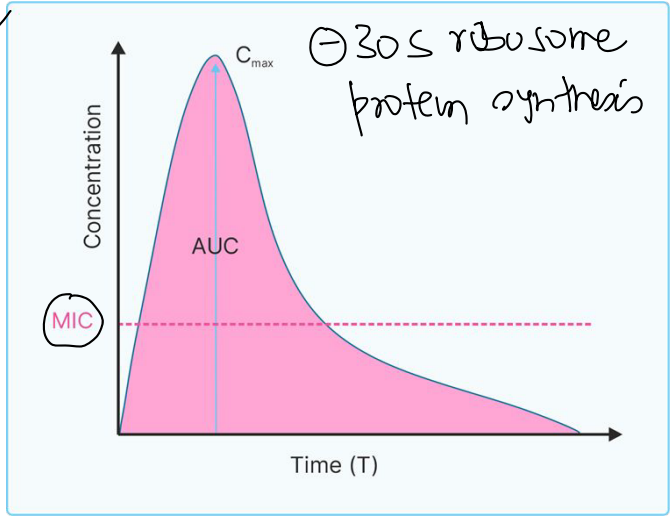
a. Post antibiotics effect continues below MIC

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

β lactams



30S ribosome protein synthesis

38. 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 ✓

39. Which side effect is not seen in patients of bronchial asthma on salbutamol?

a. Hypoglycaemia

b. Tachyphylaxis ✓

c. Hypokalemia ✓

d. Throat pain ✓

Sym ⊕⊕ Palpitation TREMORS

40. 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 day care procedure

d. Midazolam

Idiopathic intracranial HTN

41. 24-year-old obese woman presents with chronic headache and transient visual obscuration. Examination shows bilateral papilledema; MRI brain is normal. Lumbar puncture reveals opening pressure 30 cm H_2O with normal CSF composition. She is started on drug X and reports improvement. What is the mechanism of action of drug X?

MANNITOL

a. Increases plasma osmolarity and cause fluid shift across BBB

b. Decreases plasma osmolarity and cause fluid shift across BBB

c. Blocks aquaporin channels in the ependymal cells

d. Inhibit function of vascular tuft of pia mater in ventricles

acetazolamide
↓ production of CSF

CHOROID plexus

1° AMS = Acetazolamide

immediate descent

HAPE ⇒ Nifedipine
HACE ⇒ dexamethasone

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

a. Hyperglycaemia ✓

b. Hyperlipidaemia ✓

c. Hyperuricemia ✓

d. Ototoxicity

43. 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 NDI

b. Amiloride $Li^+ \rightarrow$ NDI

c. Indomethacin

d. Desmopressin CDI

nephrogenic DI induced Lithium

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

Heparin

a. Vitamin K

b. Protamine sulphate

c. Idarucizumab

d. Andexanet alpha

*

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

a. Fondaparinux

b. Enoxaparin

c. Dalteparin

d. Apixaban Direct factor X ⊖

46. Gene that leads to methicillin resistant Staph aureus is

a. mecA

b. mecR1

c. rpoB

d. pncA

Rmp

Pyrazinamide

gas gangrene

47. 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

48. Which of the following drug acts a decoy antigen to autoreactive T lymphocytes in management of relapsing remitting multiple sclerosis?

a. Glatiramer → Myelin binding protein

b. Natalizumab

c. Fingolimoid

d. Methylprednisolone

-Glatiramer= L-Glutamic acid + L-Lysine + L-Alanine+ L-Tyrosine and resembles MBP

-Natalizumab = Anti-α4 integrin antibody
Prevents leukocyte migration across BBB

-Fingolimod = Traps lymphocytes in lymph nodes
oral

-Methylprednisolone= Used for acute MS relapse, not disease modification

L 1st * young ♀ : Monocular blindness

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

a. Aminoglycosides

b. Macrolides

c. Cephalosporins

d. Monobactams

50. 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

51. 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?

GONORRHEA

a. Ceftriaxone single intramuscular dose

b. Azithromycin single oral dose

c. Benzathine penicillin single does

d. Ciprofloxacin single oral dose

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

a. Carcinoid crisis ✓

b. Acromegaly ✓

c. Osmotic diarrhoea

d. Bleeding oesophageal varices ✓

53. Which of the following is cephalosporin uses iron transport channels to enter bacteria

a. Ceftaroline

b. Cefiderocol

c. Ceftazidime

d. Ceftriaxone

54. 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 ⊖ Ach Release at NMJ, prolong NM blockade

b. Beta lactams

c. Cephalosporins

d. Penicillin

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

a. Oral iron

b. IV iron

c. Darbepoetin DOC : IRON Replete pt

d. Packed RBC

56. 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 HbF conc^{N} ↑

c. Folic acid

d. Erythropoietin

57. 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 ↓

Tumor lysis syn

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

58. 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

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

a. Fluorouracil ✓

b. Capecitabine ✓

c. Liposomal doxorubicin ✓

d. Vincristine

P. neuropathy: glove & stocking Anaesthesia

60. 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

61. Patients with M3- AML are put on treatment. He developed a fever with breathing difficulty. Which drug is used for management of this patient?

a. Steroids

b. A.T.R.A

c. Arsenic trioxide

d. Rituximab

differentiation syn

ATRA side effect

Malive cells: pulm endothelium #

Cytokine production.

62. 1mg of 1:10,000 epinephrine is used for management of which of the following

a. Anaphylaxis 1:1000

b. Pulseless electrical activity

c. Electromechanical dissociation Cardiac Rupture

d. AV dissociation H. block : Atropine

63. 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

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

a. Grade I ⟶ meta analysis of RCT
b. Grade II — Single RCT
c. Grade III — COHORT
d. Grade IV — CASE SERIES

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

a. Phase 1

b. Phase 2

c. Phase 3

d. Phase 4

66. A 30-year-old lady with migraine attacks also has Raynaud phenomenon on cold water exposure. Which of the following drugs is best suited for her episode management

a. Sumatriptan

b. Lasmiditan

c. Galcanezumab

d. Propranolol

RP + migraine

Vasospastic disorder

digoxin

67. 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

lipid soluble

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

CETRIZINE
H_1 Receptor

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

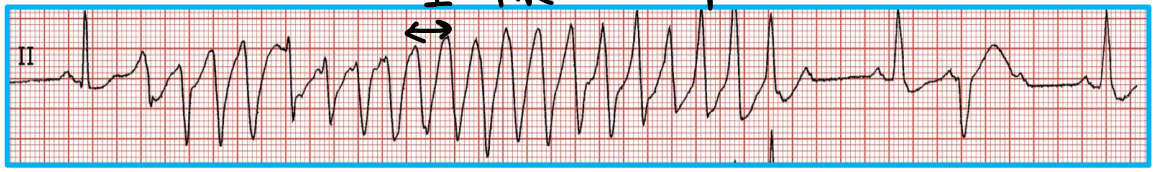
69. A 30-year-old patient with heart failure is on drug X. He developed palpitations and his ECG on admission to ER is shown below. Which of the following drugs is likely responsible for this rhythm?

a. Digoxin ST↓

b. Furosemide

c. Ivabradine → HR↓

d. ACEI : K↑



1 HR = 300bpm

Polymorphic V-T: K↓

70. 32-year-old woman with anti Scl-70 antibody positive status and progressive dyspnea is diagnosed with severe pulmonary arterial hypertension on right heart catheterization. She is started on a drug that an intravenous infusion for her condition. Which of the following drugs was most likely started?

a. Sildenafil — PDE-5 ⊖

b. Epoprostenol — prostaglandin

c. Bosentan — Endothelin receptor Antagonist : VD in pulm Bed

d. Ambrisentan

SCLERODERMA

Macitentan + Tadalafil + Epoprostenol ⇒ Triple Therapy for PAH

(ERA + PDE -5 inhibitor + IV prostacyclin)

= = =

HCQ + Sulfasalazine + MTX ⇒ " " RA

71. 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

amitryptiline → VT Risk ↑

72. Which of the following is a 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 ↑Ca++

d. Aspirin can blunt the diuretic effect of loop diuretics

↓
PG ↑
* afferent Arteriole dilation
RBF ↑
GFR ↑
diuresis +

lignocaine

73. 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 drugs should be given for immediate management of this patient?

*

a. Esmolol

b. Landiolol

c. Intralipid

d. Lidocaine

IV 20% lipid emulsion (intralipid)

- Acts via “lipid sink” mechanism
- Binds lipophilic drug (lidocaine)
- Reduces free plasma concentration
- Reverses CNS & cardiac toxicity

74. Which of the following is a selective JAK1 inhibitor used in Rheumatoid arthritis?

a. Upadacitinib

b. Baricitinib

c. Tofacitnib

d. Ritlecitinib

Upadacitinib →Selective JAK – 1 inhibitor used in Rheumatoid arthritis

Baricitinib →JAK -1 & JAK -2 inhibitor

Tofacitinib → Mainly JAK-1 & Jak -3 inhibitor

Ritlecitinib → Selective JAK-3 inhibitor (used in alopecia areata)

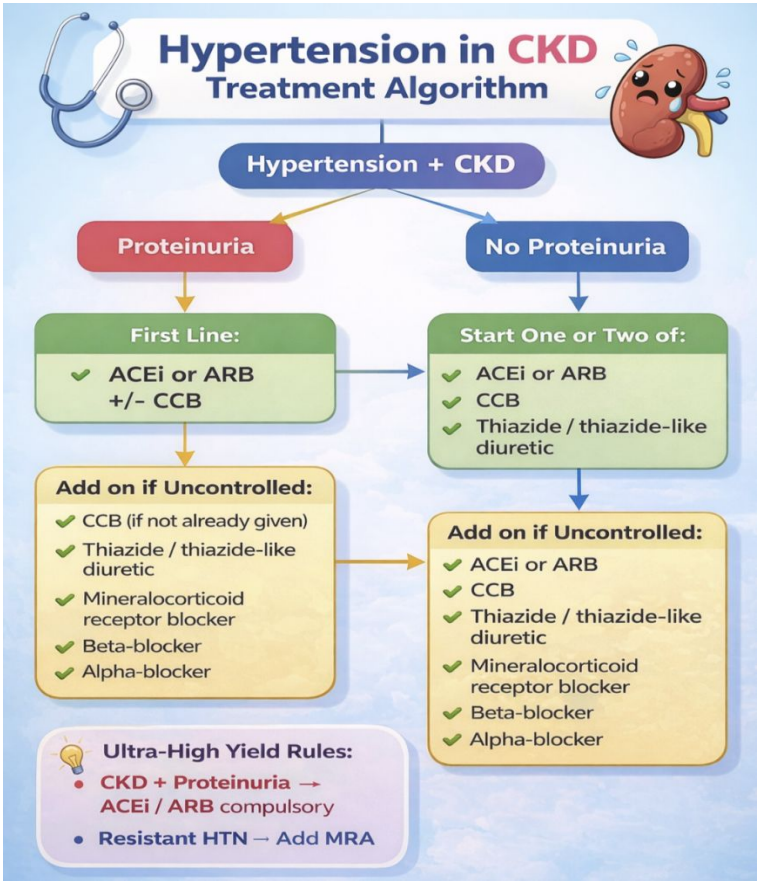
75. A patient with renal failure is having SOB and his BP is 180/100 mm Hg. Labs show Na= 130 meq /L and K= 6.5 meq/L. Which of the following anti-hypertensive drugs should be started in this patient?

a. Aliskiren K↑

b. CCB

c. Prazocin

d. Telmisartan K↑


Hypertension in CKD
Treatment Algorithm
Hypertension + CKD
Proteinuria
No Proteinuria
First Line:
ACEi or ARB
+/- CCB
Start One or Two of:
ACEi or ARB
CCB
Thiazide / thiazide-like diuretic
Add on if Uncontrolled:
CCB (if not already given)
Thiazide / thiazide-like diuretic
Mineralocorticoid receptor blocker
Beta-blocker
Alpha-blocker
Add on if Uncontrolled:
ACEi or ARB
CCB
Thiazide / thiazide-like diuretic
Mineralocorticoid receptor blocker
Beta-blocker
Alpha-blocker
Ultra-High Yield Rules:
CKD + Proteinuria → ACEi / ARB compulsory
Resistant HTN → Add MRA

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THANK YOU