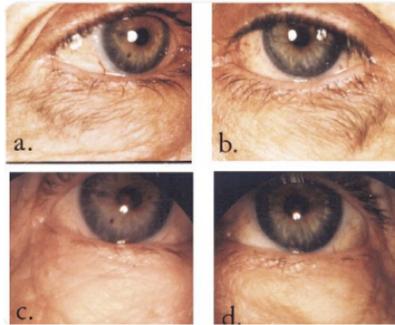


FMG

# PHARMACOLOGY



Unity wins!



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

*P. meningitis*

a. 20-year-old man with fever headache and nuchal rigidity

*Ceftriaxone + Vancomycin*

b. 30-year-old man with fever with Widal test O antigen > 1:100

*ENTERIC FEVER*

c. 10-year-old child with fever with bulging tympanic membrane

*ASOM : cefixime*

d. 25-year-old IV drug used with vegetations on heart valves

*IE : Vancomycin  
daptomycin*

*S. AUREUS*

*CONS*

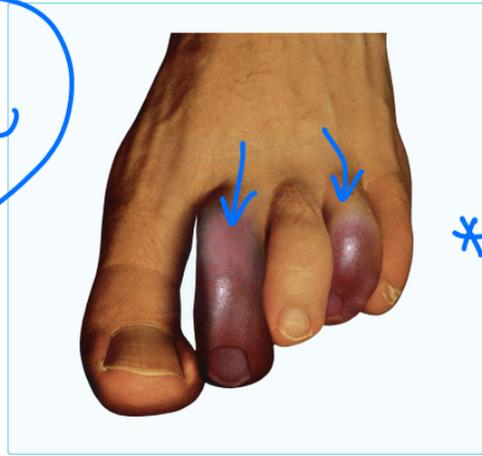
*the antibiotic of choice*

PURPLE GLOVE  $\Rightarrow$  phenytoin extravasation

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

Purple Toe Syndrome



Raynaud's P  
TAO

\* embolism of  
fragments from  
atherosclerotic plaque

warfarin

MOA: vit K antagonist      4 factor      bleeding  $\oplus$

\* warfarin Toxicity + ICH  $\Rightarrow$  P.C.C or FFP

\*        //        , INR  $> 10 \Rightarrow$  IV vitamin k

1st step: STOP WARFARIN, evaluate PT/INR

1st step - stop convulsion

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

$\text{Cl}^-$  channels opening  
=  $\downarrow$  excitability of neurons

GCSE  $\Rightarrow$  \*  $\frac{N}{\text{lim}}$  access not available  $\checkmark$

4. True statement about a drug having high volume of distribution  $V_d$  : digoxin

- a. Drug is very less distributed in tissues ~~X~~ \*
- 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 ~~X~~

lipophilic

digoxin Toxicity

Hemodialysis fails

0.5-1.4ng/dl

SE  
digoxin  
> 2ng/dl

Extracardiac	Cardiac
N/V	V. Bigeminy
Xanthopsia	NPAT & AV block

MC

Characteristic

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 ✓

*Cl. difficile*

*B12 ↓↓*

*P.P.-1 : Parietal # cell*  
*↓ Acid*  
*↓ intrinsic factor production*

Suppression of parietal cells in stomach

\*

6. Patient with M3- AML is 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 drugs shall be now used for management of this patient?

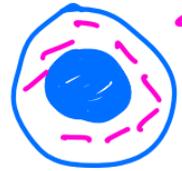
- a. A.T.R.A
- b. Arsenic trioxide
- c. Rituximab
- d. Steroids

APML  
t(15:17)

PML-RARA

Rx: A.T.R.A

AVER PODE +  
D.I.C



Retinoic  
acid

DIFFERENTIATION  
SYNDROME



IMMATURE - MATURE cells

# pulm endothelium

Rx: STEROIDS

POAG

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  $\beta$ -adrenergic receptor blockade

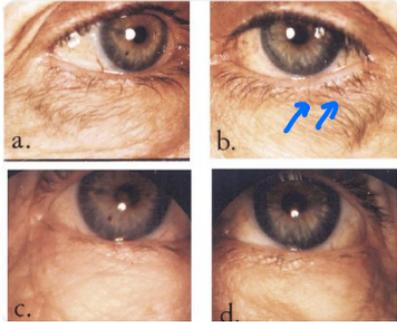
NETARSUDIL

## Mechanism:

Inhibits Rho-kinase inhibitor relaxes trabecular meshwork and increases aqueous outflow

Side effects

- Conjunctival hyperemia (most common)
- Corneal verticillata (whorl keratopathy) – very characteristic
- Subconjunctival hemorrhage

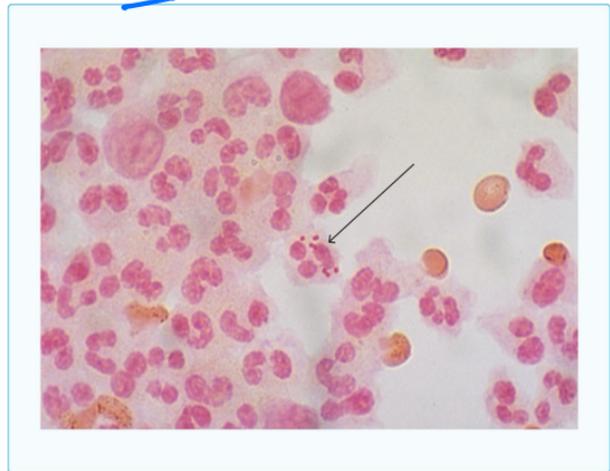


## Lanatoprost

1. Iris pigmentation \*
2. Hypertrichosis \*
3. Conjunctival hyperaemia
4. Periorbital fat atrophy and deepening of superior sulcus

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 Rx
- d. Ceftriaxone with ampicillin



gm ⊖  
CNS +  
meningo coccaemia  
Rx: C+V  
1°: FQ  
Ceflox

\*

\*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

V. Bigeminy

digoxin

⊕ Inotropic

Vagus ⊕ : ⊖ Chronotropic

✓  
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

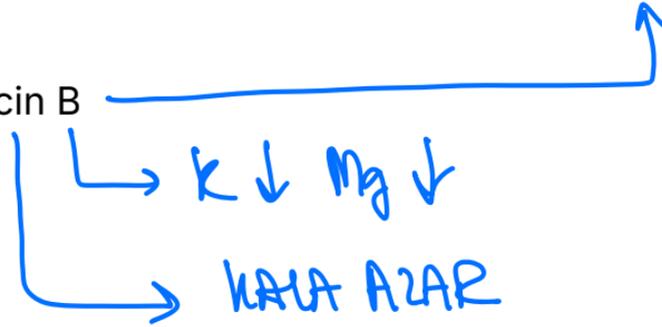
\* Brucellosis

\* SCROB TYPHUS = Eschar, W ⊕ = doxy ± Azithromycin

\* BRUCELLA = doxy + Rifampicin

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

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



KALA AZAR  
MUCORMYCOSIS

\* CRYPTOCOCCUS : LAMB + 5-FC

CSF | (urine): LATERAL flow assay for cryptococcal antigen glucytosme

Paired with...

painful swallowing

12. HIV positive patient is 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

Aspergillus

✓

Tinea corporis/unguinum

esophageal candida +

Rx: MICAFUNGIN

fluconazole: fungistatic  
 Echinocandin = fungicidal

Label

False



13. Which of the following drugs causes factitious hypoglycaemia?

a. Insulin, GLIPIZIDE

b. Metformin

c. Acarbose

d. Empagliflozin

=

MUNCHANSEN SYNDROM

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

SEMAGLUTIDE

SEMAGLUTIDE S/E

- 1. PANCREATITIS
- 2. wt loss
- 3. gall stones
- 4. RODENTS ⇒ M.C.T

CI: family H/O MEN

dual  
INCRETIN

↑ \* GIP  
modulator peptide

\* GLP-1

INSULIN ↑

It activates two receptors simultaneously so called twincretin

1. GIP receptor (Glucose-dependent insulinotropic polypeptide receptor)
2. GLP-1 receptor (Glucagon-like peptide-1 receptor)

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

a. 1:5

TABLET =

b. 1:10

c. 1:20

PLASMA

d. 1:100

TMP: SMX

AIDS ⊕: P. JIROVECI  
: ISOSPORA

Cephalexin

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

- a. Clostridium difficile
- b. Streptococcus pyogenes
- c. E. Coli : NORFLX, FQ
- d. Methicillin sensitive ~~staph~~ aureus

MSSA

Why?: Clindamycin  
PPI

P.M.C ←

- Rx
1. Fidaxomicin
  - or
  2. (oral) vancomycin

PODOGRA: GOUT

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 \* ALLOPURINOL → CI: acute attacks
- b. Microtubule polymerization inhibitor COLCHICINE ] acute gout
- c. COX-1 inhibitor INDOMETHACIN
- d. Uricosuric drug PROBENECID \*

\* ch. gout

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

\* glutamate ↑  
excitotoxicity

\* NMDA receptors  
Antagonist

drug induced parkinsonism

Why? Haloperidol, CPZ

Rx: Benzhexol, Trihexiphenidyl

## Absence seizure

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

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

# Na<sup>+</sup> channel : phenytoin

GABA-A ⊕: Cl<sup>-</sup> channels open : diazepam

Thalamic T Calcium Ca<sup>+</sup> #: ethosuximide

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

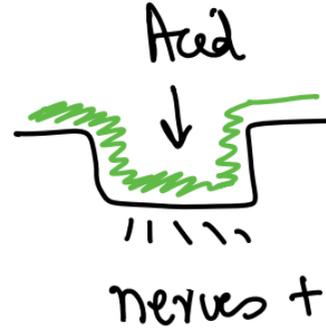
a. Phenytoin

b. Sucralfate

c. Valproate

d. Lithium

↓ Acid mucosa  
Contact Time  
—————  
SURFACE protective  
agent



\* BLACK HAIRY Tongue ⇒ EBV  
HIV ⊕

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

- a. Aspirin       $\text{Cox-1} \ominus$  irreversible,  $\ominus$  TxA<sub>2</sub> production
- b. Ticagrelor      ADP receptors #,  $\ominus$  platelet aggregation
- c. Tirofiban
- d. Vorapaxar

DAPT

1. TIA
2. STROKE : 1<sup>o</sup>
3. MI

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

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

↓  
mammalian Target of  
Rapamycin: ⊖

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

↓ HR

b. Ivabradine

↓ HR: If ⊖

c. Isosorbide mononitrate

Vasodilator

d. Alteplase

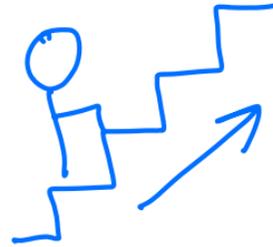
CLOT BUSTER

1. MI

2. AIS

3. MASSIVE PE

↓ O<sub>2</sub> consumption



chronic  
stable  
angina



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



all AED: wt gain +  
except Topiramate

Zoni / Topi  
\* RENAL colic  
\* GLAUCOMA

ZONISAMIDE  
TOPIRAMATE

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

- a. Mu ( $\mu$ ) receptors – G-protein coupled inhibition of neurotransmitter release
- b. Kappa ( $\kappa$ ) receptors – excitatory effect on pain fibers
- c. Delta ( $\delta$ ) receptors – enhancement of substance P release
- d. Sigma ( $\sigma$ ) receptors – non-opioid receptor producing dysphoria

\* POST-OP ANALGESIA : → FENTANYL

GLUCOSURIA

DAPAGLIFLOZIN

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 ✓

DKA = RBS > 250 mg

→ GLIPIZIDE, INSULIN \*

AHF

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

β blockers **CI**

A AHF, acute asthma

B Bradycardia

C COPD

P — Prinzmetal A

P.A.D: BURGERS

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

Oculo-gyric  
Crisis

---

Triggered by : Metoclopramide

Mx : Promethazine

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

a. Paracetamol

b. Diclofenac COX-1 ⊖

c. Tenoxicam COX-1 ⊖

d. Mefenamic acid COX-1 ⊖

COX-2 ⊖: ETORICOXIB

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 life threatening S/E
- c. Hypothyroidism ✓
- d. Corneal microdeposits : MC



Amiodarone

blue gray  
pigment

VASOMOTOR REVERSAL OF

31. After pre-treatment with an  $\alpha$ -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  $\beta_2$ -mediated vasoconstriction becomes unopposed once  $\alpha$ -receptors are blocked
- b. Noradrenaline produces the same reversal since it also has strong  $\beta_2$  activity
- c. Can be prevented if a  $\beta$ -blocker is given after  $\alpha$ -blockade +
- d. The phenomenon is mediated primarily through  $\beta_2$ -receptors in coronary circulation, overriding the  $\alpha$ -effects

$$\text{Epi} = \alpha > \beta = \text{SBP} \uparrow$$

$$\text{Epi} = \text{Ⓜ} > \beta = \text{SBP} \downarrow$$

Ⓜ Vasodilation

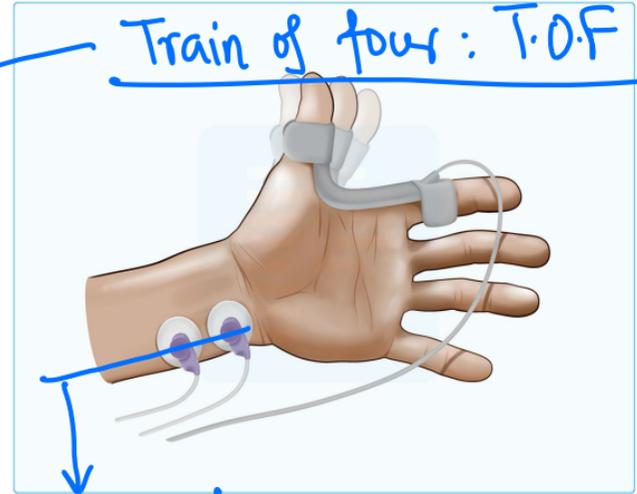
### 32. The following patch is used for which of the following patients?

- 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



ULNAR N.

OSTEOCLAST ACTIVITY ↓

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

DENOSUMAB

\* DOC OSTEOPOROSIS = iv IBANDRONATE

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 benhexol : D.I.P

b. Start beta blocker

c. Start diazepam

d. Start dantrolene sodium

\*

↓  
AKATHASIA

TIC ↓

36. All of the following drugs cause agranulocytosis except?

- a. Carbamazepine focal seizures
- b. Clozapine ⊖ symptoms of schizophrenia
- c. Carbimazole Grave's
- d. Cotrimoxazole

Pcm

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

↓  
1411  
↓  
NAPQI



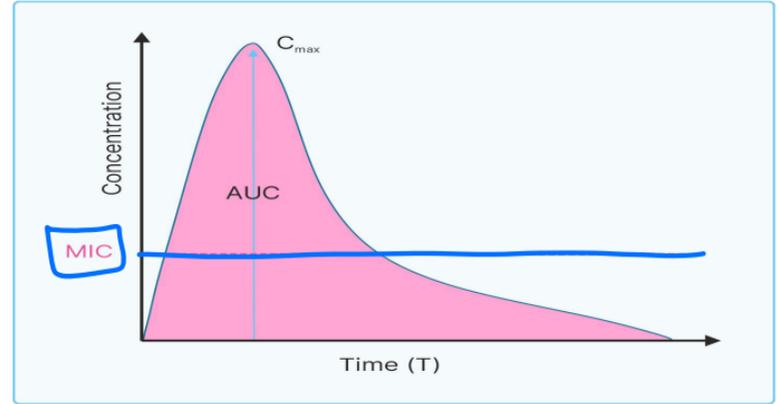
glutathione depletion

CENTRILOBULAR NECROSIS

Hepatocellular Jaundice

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 ✓

PNS

⊖ Ach E  
"degradation" of Ach  
ACh ↑



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

TOLERANCE ✓



PMDI

Sym ⊕

Glucose ↑

SEND K<sup>+</sup>

inside cells

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

day care procedure

a. Thiopentone

b. Ketamine

c. Propofol → green vomit

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 NTD ++
- c. Phenytoin NTD
- d. Carbamazepine NTD

✓ ✓  
BONES #  
fetal warfarin syn

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

Wet  
Wacky  
Wobbly  
-----  
N.P.H

Rx: acetazolamide

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

a. Hyperglycaemia ✓

b. Hyperlipidaemia ✓

c. Hyperuricemia ✓

d. Ototoxicity

> SSy6 HTN  
-----  
Amlodipine

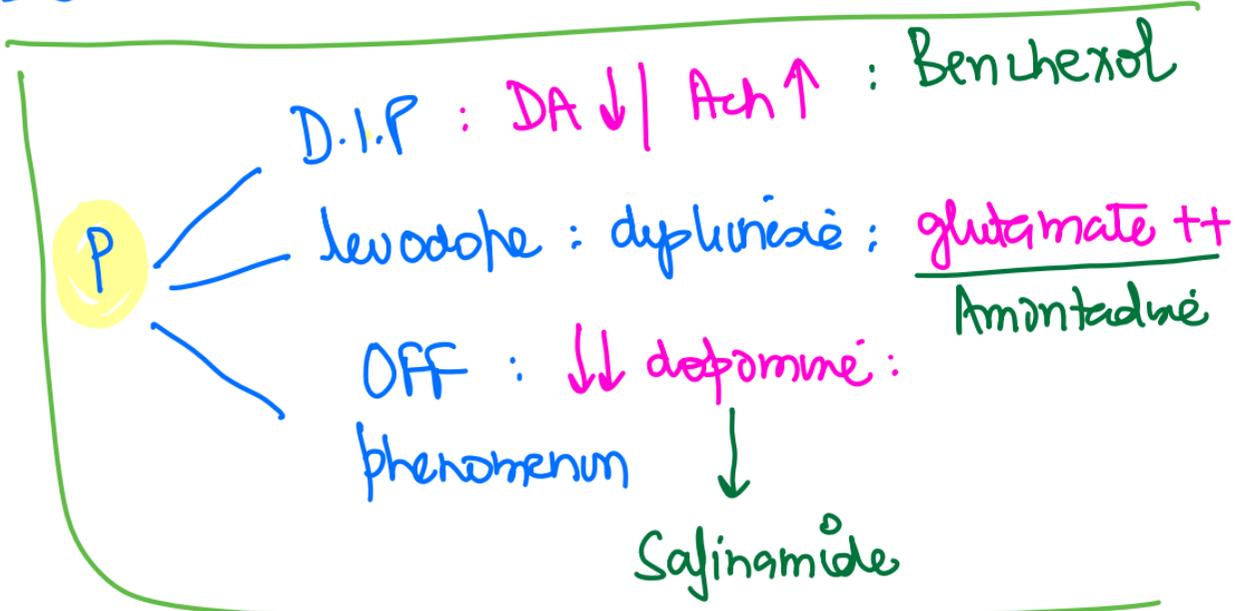
45. Which of the following drugs reduces off phenomenon in patients diagnosed with Parkinson disease

a. Safinamide MAO-B ⊖

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 <sup>\*</sup>respond to desmopressin administration. Which of the following drugs is the most appropriate for this patient?

a. Hydrochlorothiazide

b. Amiloride

c. Indomethacin

d. Desmopressin

\* lithium: N.D.I

Rx: amiloride

\* NDI = THIAZIDE

↳ Heparin

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

PT	*	warfarin Toxicity	=	vitamin k
aPTT	*	Heparin "	=	Protamine Soly
	*	apixaban "	=	Andexanet α
	*	dabigatran "	=	Idarucizumab

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

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

SC  
once  
day

=

SC Tid

---

\* Heparin/dalteparin: Anti THROMBIN III ↑

---

\* LMW heparin/enoxaparin = SC once/day

---

\* FONDAPARINUX = indirect factor X ⊖

---

\* apixaban = direct factor X ⊖  
Rivaroxaban DOAC

49. Gene that leads to methicillin resistant Staph aureus is

- a. mecA
- b. mecR1
- c. rpoB — Rmp R
- d. pncA — Pyr R

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

gas gangrene

*Cl. perfringens*

51. Most potent glucocorticoid drug is

a. Hydrocortisone

b. Dexamethasone **GLUCOCORTICOID**

c. Fludrocortisone **MINERALOCORTICOID**

d. Nandrolone

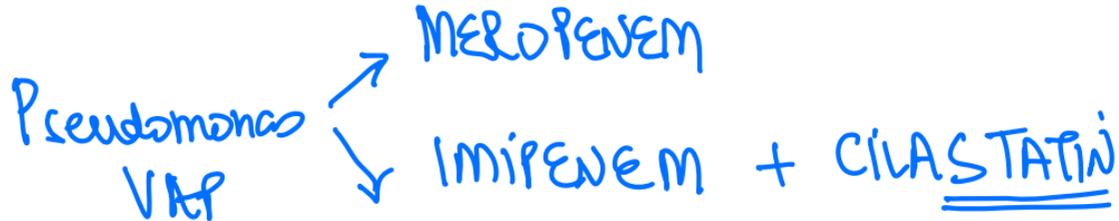
**52. Person with allergy to penicillin should not receive which of the following antimicrobials**

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

penicillin side chain

### 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 *chancroid*
- c. Benzathine penicillin single dose *sypilis*
- d. Ciprofloxacin single oral dose

GONORRHEA

Rx: CEFTRIAZONE  
single dose

SOMATOSTATIN : ⊖ HORMONE of gut

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

a. Carcinoid crisis ✓

b. Acromegaly

SHRINKING of pit. TUMOR : LANREOTIDE

c. Osmotic diarrhoea

d. Bleeding oesophageal varices ✓

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

- a. Ceftaroline
- b. Cefuroxime 2
- c. Ceftazidime 3
- d. Ceftriaxone 3

✓  
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

act on NMJ: ↓ Nm Transmission: Recovery from Nm blockade is delayed

✓  
58. Drug used for radical cure in malaria \*

a. Chloroquine ✓

b. Primaquine

c. Artesunate ✓

d. Mefloquine ✓

~~SCHIZONT~~

\*

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

DOC for NCNC Anemia in CKD

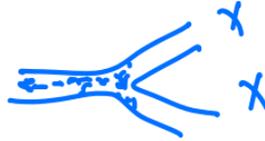
60. A 14-year-old boy with known sickle cell anemia presents with recurrent episodes of painful vaso-occlusive crises and has required multiple hospital admissions. Laboratory workup shows chronic hemolytic anemia. Which of the following drugs can reduce the frequency of painful crises by increasing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

a. Iron supplementation

b. Hydroxyurea

c. Folic acid

d. Erythropoietin



glutamate goes out

Valine comes in

RBC Sticky

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



PURK -  $Ca^{+}$

PO<sub>4</sub>, URIC ACID, K<sup>+</sup> ↑, Ca ↓

Tumor lysis syndrome

CYCLOPHOSPHAMIDE Toxicity

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 *Radiation Toxicity*

c. Leucovorin *MTX Toxicity*

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 P. neuropathy

\* HFMD  
COXSACKIE A / Herpangine

\* HAND FOOT SYNDROME  
ACRODYSTHESIAS

## ch ITP

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 \* IL-11: ↑

c. Eltrombopag

|| T.P.O ↑

d. Romiplostim

ELEVEN



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

a. Anaphylaxis  $\longrightarrow$  1mg, 1:1000 dilution. 1m

b. Pulseless electrical activity | ASYSTOLE 1mg, 1:10,000 \* , iv

c. Electromechanical dissociation

d. AV dissociation HEART BLOCK: PACEMAKER

CARDIAC RUPTURE

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 ✓

TORSADES de pointes

BPaLM

Bedaquiline

PRETOMANID

linezolid

Moxifloxacin

⊖ ATP synthase

N<sub>2</sub> Reactive species

protein synthesis

DNA gyrase ⊖

LIVER ++, QT ↑  
T.D.P

MDR  
= 6 months

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

Grade	Study Type
I	Systematic reviews / Meta-analyses / High-quality RCTs
II	Well-designed cohort or case-control studies
III	Case series, case reports, non-experimental studies
IV	Expert opinion, consensus statements, animal studies

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

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

Category	Phase 1	Phase 2	Phase 3	Phase 4
Also Called	First-in-human	Therapeutic exploratory	Therapeutic confirmatory	Post-marketing surveillance
Primary Purpose	Safety & tolerability	Dosing & preliminary efficacy	Confirm efficacy & safety	Long-term safety & effectiveness
Key Question	Is it safe?	Does it work & what dose?	Is it better than existing treatment?	What happens in real world?
Population	Healthy volunteers (mostly)	Patients with target disease	Large patient population	General public / patients
Sample Size	20-100	50-300	300-3000+	Thousands to millions

**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:

CETIRIZINE



- 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

\* PACG  
MYDRIASIS  
→ ⊖ aqueous outflow

Miosis  
CONTRACTION

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

a. Anti hypertensives in pregnancy **LABETALOL**

b. Patient on ACT with cerebral malaria

c. CHF patient on ACE inhibitor

**d.** Depressed patient on TCA **amityptiline**

TDM  
=

1. Anti epileptic drug
2. Anti psychotics

LASIX : FUROSEMIDE : LOOSE CALCIUM

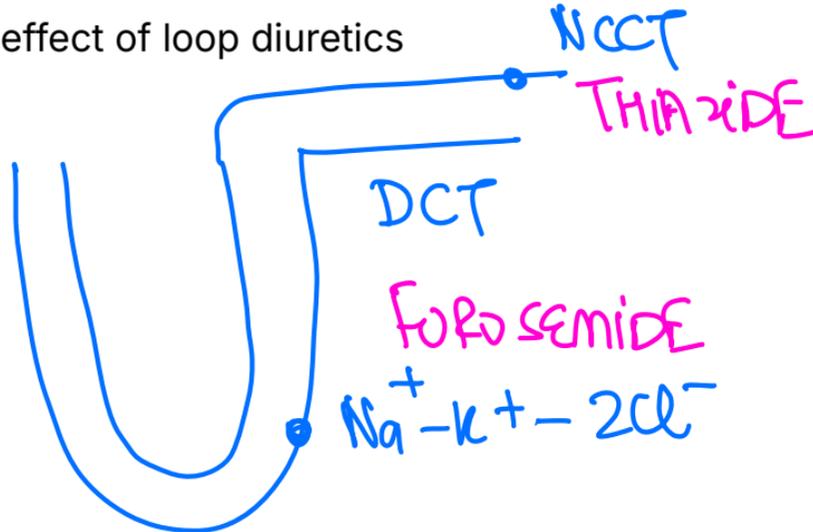
73. True statement about loop diuretics:

- 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

HYPER CALCEMIA

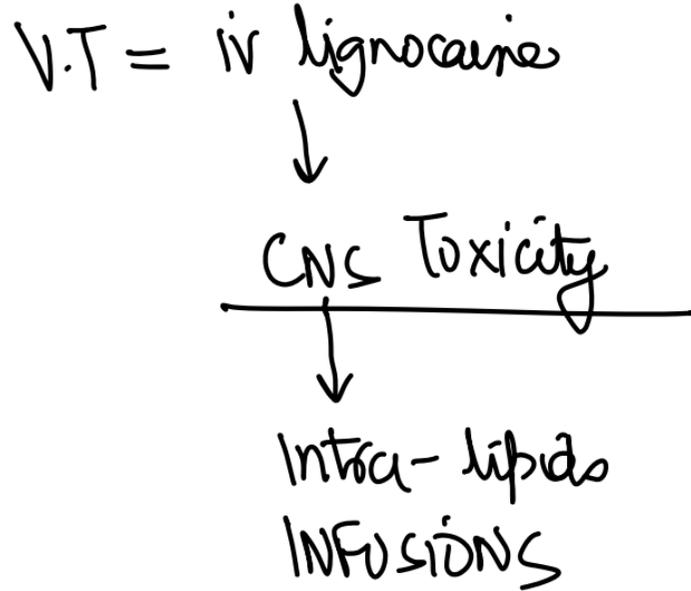
- d. Aspirin can blunt the diuretic effect of loop diuretics

Pa<sup>⊖</sup>



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



→ T.D.P

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 H<sub>1</sub>-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

ALLEGRA

c. Cetirizine

Sedation

d. Montelukast

leukotriene modifier

**THANK YOU**