Roll No F16-063 (13)

Topic **Drug used as Rheumatoid Arthritis** 2

(P.P)

Q no 16(a) Give MOA of **Methotrexate**

cytotoxic to rapidly dividing immune cells due to inhibition of dihydrofolate reductase.

(b)

Clinical uses

- Anticancer
  - colon cancer
  - Brest cancer
  - Ectopic pregnancy
  - Bladder cancer
- Rheumatic disorder

Adverse Effect (P.P)

- Nausea
- mucosal ulcer
- Hematotoxicity
- Hepatotoxicity
- Teratogenicity

- Nausea
- Vomiting
- Diarrhea
- Cirrhosis.

Qno17 (P.P) Enlist four disease Modifying Anti Reumatic drug DMARDs

Abatecpt
Methotrexate
Penicillamine
Sulfasalazine
Rituximab
Leflunamide
Cyclosporine

(15) MBBS F16-063

Topic: Antimycobacterial tuberculosis (T.B)

P.P

Q no 18 Classify drugs used in treatment of Tuberculosis

First line Drug or Primary Drug.

- Isoniazid (INH) & Rifampin most active drug.
- Rifampin
- Ethambutol
- Pyrazinamide
- Streptomycin

Second line drugs or Secondary drug.

- Para amino Salicyclic acid
- Clofazimine
- Levofloxacin
- Rifapentine
- Ethionamide
- Rifalutin
- Amikacin
- Ciprofloxacin

P.P

Qno19. Give mechanism of action of Isoniazid (INH)

- Inhibit the synthesis of mycolic acid which are essential component of mycobacterial cell wall.
- It is prodrug that is activated by KatG gene that codes for a mycobacterial catalase peroxidase involved in bioactivation of INH.
- Activated form of INH forms a covalent compl with an acyl carrier protein & KASA a beta Ketoacyl carrier protein synthesis which block Synthesis of mycolic acid & kill the cells.

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(a)

Qno20 Give **Anti Bacterial** Spectrum of INH

- Bacteriostatic
- M. tuberclosis
- Mycobacterium Kansasii

(b) P.P **Adverse Effect** of INH

- Allergic Reactions
- Fever, Skin rashes
- Drug Induced SLE
- Hepatitis
- Peripheral neuritis
- Anemia
- CNS → Memory loss
  - Convulsions

P.P

Q no 21 (a) Give mechanism of action of **Rifampin**

- DNA dependent RNA polymeraze catalyzes the transcription of RNA from a DNA templlate
- Binds strongly with DNA dependent RNA polymerase
- Inhibit RNA synthesis in bacteria.
- Human RNA polymerase is not affected because it does not bind rifampin.
- It is usually bacteriocidal for mycobacterium

(b) Resistance.

Resistance of rifampin can be used by a mutation in the affinity of bacterial DNA dependent RNA polymerase for drug.

Qno22 Give Antimicrobial Spectrum of Rifampin

- M. tuberculosis
- M. Kansasii
- Haemophilus Influenza
- Mycobacterium avium- Intracellular complex

Qno23 Give clinical uses of Rifampin.

- latent TB
- leprosy
- Atypical mycobacterial Infections
- used with vancomycin for MRSA
- Meningioccal
- MAC atypical mycobacterium Infection.

Qno24. Give Adverse Effect of Rifampin

- Nausea
- Vomiting
- Rash
- Hepatitis and death due to liver failure
- Flu-like Syndrome
- Fever, chills and myalgis
- Hemolytic anemia
- Shock.

Qno25 Enumerate drug used in Treat of Leprosy.

- Clofazimine
- DapSone
- Rifampin

(21)

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Qno26 (P-P) Enumerate drug used first line drug vin T.B and adverse Effect.

Drug	Adverse Effects
Ethambutol	optic neuritis with blurred vision red - green colour blindness
Isoniazid	Hepatic enzyme elevation Hepatitis, peripheral neuropathy
Pyrazinamide	Nausea gout Hepatitis Rash
Rifampin	Hepatitis GI upset Rash Flu-like syndrome

P.P

Qno27 What is Rationale of using pyridoxine with Isoniazid?

Isoniazid inhibits mycolic acid synthesis in mycobacterium thy giving vit B_6 along with isoniazid prevents complication associated with this Inhibition Including peripheral neuritis insomnia, restless, convulsion, muscle twitching urinary retention without affecting antimycobacterial activity of isoniazid In short it alleviate neurotoxic effect.

P.P

Qno28 What is Rationale behind use of multi-drug therapy in T.B

Multidrug therapy is used to prevent emergency of drug resistant mutants during the long (6-9) month duration of treatment Organisms that become resistant to one drug will be Inhibited by another.

Strains of m. tuberculosis resistant to multi drug have emerged primarily in AIDs patient.