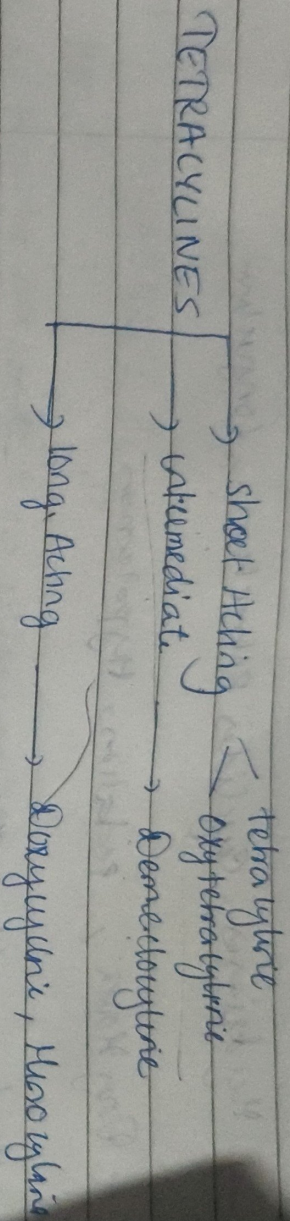


Broad Spectrum Antibiotics:

- Tetracyclines
- chloramphenicol



MDA: - bacteriostatic.

- Inhibit bacterial synthesis:

→ mRNA + tRNA

→ Ribosome 30s & 50s

↓
peptidyl site & Acceptor site
(P) (A)

- mRNA attaches to 30s & Initiation complex starts protein synthesis & polypeptide formation

nascent peptide chain is attached to P site

↓

- Next AA is transferred to A site by its tRNA

↓

elongated peptide chain is shifted back from A to P site & Ribosome moves along mRNA to expose next codon for attachment

↓

finally process terminated by termination complex

Tetracyclines → Bind to 30s Ribosome & inhibit amino Acyl tRNA attachment to Acceptor (A) site prevent peptide chain elongation.

Spectrum

- GPC of Gram +ve
- Bacilli, spirochetes, All Rickettsiae, Mycoplasma, Actinomyces
- Enteric Atrophilia. (cf Plasmid)**

TETRACYCLINE RESISTANCE

efflux pump

→ enzymatic degradation

→ Protein is cytoplasm chemically
degraded (Rac)

30S Ribosome

Ribosome

Protection from

(RPPS) binding

to site.

PHARMACOKINETICS

- Bind to connective tissue in bone & teeth
- Milk, iron preparation, ↓ Absorption
- chelating Property → unstable & unsuitable compounds with Ca
- excretion - urine

- **vd** high

ADVERSE EFFECTS

- epigastric pain, Hemorrhagic ulcers, Esophageal ulceration
- organ toxicity - liver damage
- Taste sensitivity → Brown discoloration all formed teeth
- Kidney damage
- Damaging PCR
- Fournier's syndrome

variable toxicity

Hypersensitivity Rx

→ suppression & death marked suppression of
peridontal bone

CI is Pregnancy, lactation, children, with drinking.

- Do not ingest - very painful

USES:

1st drug of choice is → Atypical pneumonia

→ Chlamydia

→ Plague

→ Relapsing fever

→ Rickettsial infection

→ Venereal disease

2nd choice of drug → tetanus, leptospirosis, syphilis

→ UTI, CAP, Amebiasis, Acne vulgaris

CHLORAMPHENICOL:

Streptomyces mazzuelae

MOA → Inhibit- bac peptidic synthesis:

- by interfering with transfer of elongating peptidyl chain to the newly attached Amino Acyl tRNA

- bind to 50S Ribosome near A site if prevent peptide bond formation.

→ Bacteriostatic

HAEMOKINETICS

↓ BBS BBS, plasma.

- (imp-188) with

glutamic Acid is low (amphibian nomenclature - low conjugation).

Uses:

→ Pyogenic meningitis

→ Phagocytosis of bacteria is very poor in CSF

→ Typically in conjunction, extend as infection

→ Bone marrow depression

→ Aplastic Anemia, Thrombocytopenia or Pancytopenia.

→ Hypernatremia R.N.

→ Glucocorticoid therapy in CSF

→ Phagocytosis of bacteria in CSF

↓ BBS BBS is not very good. bacteria are very sensitive to CSF

CSF protein - 0.1 - 0.2 g/L

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