

Glycylcyclines

Glycylcyclines represent a new group of antibiotics that is derived from the tetracycline antibiotic minocycline. The main representative is **tigecycline**. Tigecycline is a broad-spectrum ATB (effective against Gram-negative, Gram-positive and anaerobic microbes, but not effective against pseudomonads and proteus). Tigecycline is chemically a 9-t-butylglycylamido derivative of minocycline.

Indication

They are indicated for complicated skin and soft tissue infections as well as intra-abdominal infections.

Mechanism of action

Their mechanism of action is: inhibition of proteosynthesis, (blocking of translation of protein in bacteria by binding to the **ribosomal subunit 30S**, blocks the entry of aminoacyl-tRNA molecules into the A site of the ribosome).

Antimicrobial spectrum

It is a **broad-spectrum antibiotic** that acts on many clinically important bacteria. Both gram-positive, gram-negative, anaerobic and atypical, including some multi-resistant, penicillin resistant *Streptococcus pneumoniae*, *Klebsiella pneumoniae* and *Escherichia coli*, *Staphylococcus aureus*, from gram-negative bacteria shows a lower sensitivity to *Pseudomonas aeruginosa*, *Proteus mirabilis*, *Burkholderia cepacia* and *Stenotrophomonas maltophilia*.

Side effects

Side effects are:

- nausea,
- vomiting,
- diarrhea.

Links

Related articles

- Antibiotic to treat staphylococcal infection
- Tetracycline antibiotics
- Antibiotic resistance

References

- VOJTOVÁ, Vladimíra – URBÁNEK, Karel. Glycylcycliny - Nová skupina antibiotik. *Klin Farmakol Farm* [online]. -2008, y. 3, p. 113-115, Available from <<http://www.solen.cz/pdfs/far/2008/03/06.pdf>>. ISSN 1803-5353.