

Doxin®

Doxycycline

Description

Doxycycline (Doxin®) is a semisynthetic tetracycline antibiotic. It is active against a wide range of gram-positive and gram-negative bacteria, spirochetes, mycoplasma and rickettsia.

Mode of action

Doxycycline (Doxin®) is broad-spectrum bacteriostatic agent that acts by inhibiting protein synthesis by blocking the binding of aminoacyl-tRNA (transfer RNA) to the mRNA (messenger RNA)-ribosome complex. Reversible binding occurs primarily at the 30S ribosomal subunit of susceptible organisms.

Pharmacokinetics

Doxycycline (Doxin®) is readily and almost completely absorbed from the gastrointestinal tract and absorption is not significantly affected by the presence of food in the stomach or duodenum. From 80 to 95% of doxycycline in the circulation is reported to be bound to plasma proteins. Its biological half-life varies from about 12 to 24 hours. Doxycycline is more lipid-soluble than tetracycline. It is widely distributed in body tissues and fluids.

Composition

Doxin® 50 mg Capsule: Each capsule contains Doxycycline 50 mg as Doxycycline Hyclate BP.

Doxin® 100 mg Capsule: Each capsule contains Doxycycline 100 mg as Doxycycline Hyclate BP.

Indications

Respiratory tract infections, pneumonia, genito-urinary tract infections, skin and soft tissue infections, gastrointestinal infections, chronic prostatitis; sinusitis, syphilis, pelvic inflammatory disease, treatment and prophylaxis of anthrax; malaria treatment and prophylaxis; recurrent aphthous ulceration, adjunct to gingival scaling and root planning for periodontitis; oral herpes simplex; rosacea, acne vulgaris.

Dosage & administration

200 mg on first day, then 100 mg daily; severe infections (including refractory urinary tract infections), 200 mg daily. Early syphilis, 100 mg twice daily for 14 days; late latent syphilis 200 mg twice daily for 28 days. Uncomplicated genital chlamydia, non-gonococcal urethritis, 100 mg twice daily for 7 days (14 days in pelvic inflammatory disease). Anthrax (treatment or post-exposure prophylaxis), 100 mg twice daily. Child (only if alternative antibacterial can not be given) 5 mg/kg daily in 2 divided doses (maximum 200 mg daily).

Side effects

Nausea, skin rashes, diarrhoea, anorexia, glossitis and physical weakness may be

reported. Anosmia or dysosmia (absent or impaired sense of smell) have occasionally been reported in patients receiving doxycycline. Doxycycline has been associated with acute attacks of porphyria and is considered unsafe in porphyric patients.

Contraindications

Hypersensitivity to any of the tetracycline antibiotics.

Use in pregnancy & lactation

Tetracycline antibiotics, such as doxycycline, can have toxic effects on development of bone in the foetus. Therefore, tetracyclines are not recommended during pregnancy unless there is no other appropriate antibiotic.

Doxycycline is secreted into breast milk. Since tetracyclines can cause decreased bone, the use of tetracyclines in nursing mothers is of concern. The physician must decide whether to recommend that a nursing mother discontinue nursing during treatment with tetracyclines or to choose a different antibiotic.

Precautions

It is advisable to avoid giving doxycycline in conjunction with any penicillin. Antacid and iron may interfere the absorption of doxycycline.

Drug interactions

Doxycycline should not be taken at the same time with aluminium, magnesium, or calcium based antacids. Similarly, doxycycline should not be taken with minerals (such as calcium or iron), with bismuth subsalicylate. Doxycycline may enhance the activity of warfarin and cause excessive "thinning" of the blood, necessitating a reduction in the dose of warfarin. Phenytoin, carbamazepine, and barbiturates (such as phenobarbital) may enhance the metabolism of doxycycline thus making it less effective.

Overdosage

The treatment should be symptomatic.

Storage

Store in a cool and dry place, protected from light.

Packaging

Doxin® 50 mg Capsule: Each carton contains 10X5 capsules in blister pack.

Doxin® 100 mg Capsule: Each carton contains 10X10 capsules in blister pack.

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