

Ermac®

Erythromycin

Description

Erythromycin (**Ermac®**) is a macrolide antibiotic with mainly bacteriostatic action against a wide range of bacteria. Erythromycin is isolated from certain strains of *Streptomyces erythraeus*.

Mode of action

Erythromycin inhibits microsomal protein synthesis in susceptible organisms by inhibition of the translocation process. Specific binding to the 50S or 70S ribosomal subunit occurs in the organisms but there is no binding to the stable 80S mammalian ribosome. Erythromycin is active against many gram-positive and some gram-negative bacteria and mycoplasma and chlamydia.

Pharmacokinetics

Erythromycin ethyl succinate is absorbed as the unhydrolyzed ester. The absorption of erythromycin ethyl succinate in children may be enhanced by food. Plasma protein binding of erythromycin ranges from 73 to 93%. Erythromycin is distributed within an apparent volume of 0.75 L/kg and eliminated with half-life of 1-1.5 h. Erythromycin is inactivated by N-demethylation in the liver and 5 to 10% of the dose is excreted unchanged in the urine.

Composition

Ermac® Suspension: Each 5 ml contains Erythromycin Ethyl Succinate BP 146.80 mg equivalent to Erythromycin 125 mg.

Indications

Upper respiratory tract infections: Pharyngitis, otitis media, sinusitis. Lower respiratory tract infections: It is effective in community acquired pneumonia and bronchitis. Erythromycin is also effective against *Streptococcus pneumoniae*, *Legionella*, *Mycoplasma*, *Chlamydia*, and pneumonia caused by *Nocardia* sp., *Actinomyces israelie* and *Coxiella burneti*. Skin infections: Streptococcal cellulitis, erysipelas, impetigo, infections involving penicillinase producing *Staphylococcus aureus*, acne vulgaris, erythrasma. Bone infections: Staphylococcal osteomyelitis caused by sensitive organisms will respond to erythromycin but long course is necessary. Sexually transmitted diseases: Chlamydial infections of genital tract and lymphogranuloma venereum, Chlamydia trachomatis infection, syphilis. Eye infections: Chlamydial ophthalmia neonatorum infection and trachoma. Gastroenteritis, prophylaxis of wound infection after colorectal surgery when combined with an aminoglycoside. Prophylaxis: Erythromycin may be used for prophylaxis in penicillin-allergic patients with bacterial endocarditis.

Dosage & administration

Adult and Child over 8 years: 250-500 mg every 6 hours or 0.5-1 gm every 12 hours; upto 4 gm daily in severe infections. Child 2-8 years: 250 mg every 6 hours; doses to be doubled for severe infections. Child upto 2 years: 125 mg every 6 hours. Neonate: 30-45 mg/kg daily in three divided doses. Early syphilis: 500 mg 4 times daily for 14 days. Uncomplicated genital chlamydia, non-gonococcal urethritis: 500 mg twice daily for 14 days.

Contraindications

Hypersensitivity to erythromycin, patients with existing liver dysfunction or who are currently receiving potentially hepatotoxic drugs.

Side effects

Nausea, vomiting, abdominal discomfort, diarrhoea, urticaria, rashes and other allergic reactions, reversible hearing loss reported after large doses, cholestatic jaundice, cardiac effects, myasthenia like syndrome, Stevens-Johnson syndrome and toxic epidermal necrolysis also reported.

Use in pregnancy & lactation

There is no evidence that the use of erythromycin is hazardous in pregnancy though it crosses the placental barrier. Erythromycin reaches concentrations in human milk higher than those in maternal plasma; however, problems have not been encountered in the neonate.

Precautions

Erythromycin should be given with care in patients with impaired hepatic and renal function.

Drug interactions

Erythromycin interacts with many drugs because of its effects in inhibiting cytochrome P450, particularly those are metabolized by the CYP3A4 isoform.

Overdosage

Erythromycin is of low toxicity but when taken in overdose nausea, vomiting and diarrhoea may occur.

Storage

Store in a cool (Below 25° C temperature) and dry place protected from light.

Packaging

Ermac® Suspension: Each carton contains a bottle having dry powder to reconstitute 100 ml suspension.


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