



CEPHAPET 600

SAGARPA REGISTRATION Q- 7972-070

First generation cephalosporin.

FORMULA:

Cephalexin (monohydrate)... 7.2 gr.

Vehicle c.b.p..... 60 ml.

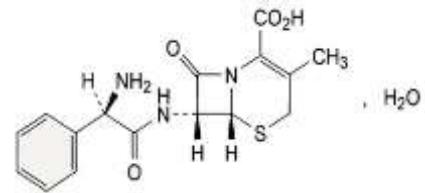


Presentation: 60 ml.

CEPHAPET 600 is a first-generation broad-spectrum beta-lactam antibiotic indicated in infections caused by Gram-positive and Gram-negative bacteria. CEPHAPET 600 is indicated for the treatment of the following microorganisms: Streptococcus spp., Staphylococcus intermedius, Staphylococcus aureus Proteus spp., E. coli, Klebsiella spp., Actinobacillus, Pasteurella spp., Haemophilus spp., Shigella spp.

Cephalexin

Cephalexin is a semi-synthetic oral cephalosporin, usually comes as a monohydrate, is produced as a white to whitish, crystalline powder. It is slightly soluble in water and practically insoluble in alcohol.



MECHANISM OF ACTION:

It acts by preventing the transpeptidation of the wall, thus preventing the polymeric binding of the so-called Park nucleotides, functional and structural units of the membrane. Inhibition of transpeptidation occurs by blocking two enzymes, transpeptidase and carboxypeptidase. The reaction couples the nucleotides to give a third dimension to the wall, and that its general chemical constitution has been described as glycoprotein, peptidoglycan. These mechanisms of action can be interfered with because they act on bacteria in growth processes with active generation against gram-positive germs, the result of the interruption in the regeneration of the wall, as well as the acceleration of its autolysis, would cause an imbalance that would destroy the bacteria.

Cephalexin is a cephalosporin of first generation bactericide derived from Cephalosporin C produced by Cephalosporium acremonium, It has bactericidal activity against gram positive, effective against some gram negative.

Very susceptible bacteria: (CIM < 4ug/ml) gram-positive aerobes: Staphylococcus intermedius, Staphylococcus aureus, Streptococcus spp., Corynebacterium spp. Erysipelothrix rhusiopathiae and Listeria monocytogenes, gram-positive anaerobes: most Clostridium spp. , Fusobacterium spp., Actinomyces spp., Bacillus spp some gram-negative anaerobes: Bacteroides spp., gram-negative aerobes such as Haemophilus spp. and Pasteurella spp.

Moderately susceptible bacteria: (CIM < 8 – 16ug/ml) Escherichia coli, Proteus spp. ,Salmonella spp., Klebsiella spp., Actinobacillus spp., Brucella spp.

Resistant bacteria: (CIM > 32ug/ml) Bacteroides fragilis, Bordetella bronchiseptica, Campylobacter spp. Citrobacter spp., Enterobacter spp., Enterococcus spp., Nocardia spp., Pseudomonas aeruginosa and Serratia spp.



Dejando huella en la
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PHARMACOKINETICS:

It is absorbed almost entirely in the gastrointestinal tract, and reaches therapeutic levels in a period of 30 to 60 minutes after its administration its bioavailability is between 75 to 90% and can even reach therapeutic concentrations at the fetal level. However, they do not penetrate the cerebrospinal fluid under normal conditions and in case of inflammation effective concentrations are not achieved; they bind 60% to plasma proteins. The plasma half-life time is often between the limits of 30 to 120 minutes. Food reduces the maximum concentrations of cephalixin, but has a negligible influence on the degree of absorption, however it is recommended to avoid the adverse digestive effects of cephalixin. It is excreted by renal route, by renal filtration and by active tubular secretion. The existence of renal insufficiency can cause an increase in half-life. Its half-life of excretion is 1-2 hours. More than 90% of the dose is excreted in the urine unchanged. Its excretion is performed 60 -80% by active tubular secretion, which can be blocked by Probenecid. Also its excretion may decrease in newborns due to the incomplete development of their renal function. The same happens in individuals with renal alterations. 20-30% is bio transformed into metabolites of low antimicrobial activity which are also excreted in the urine.

The effectiveness of cephalosporins is because they are time dependent so to achieve efficacy against *Staphylococcus pseudintermedius* the twice daily dosage interval (BID) is recommended at a dosage of 22 mg / kg

Clinical use in dogs and cats:

Cephalexin is one of the most used antibiotics in dogs and cats, it is used in infections caused by streptococcus and staphylococcus, also less frequently in infections caused by anaerobic germs.

Cephalexin is the antibiotic of first choice in superficial and deep canine pyodermas, especially in the latter, since it is the one that works best. It is used in forunculosis, abscesses, infected wounds.

In infections of the upper respiratory tract as well as bronchi and lungs it manifests itself as very effective.

Prolonged use in canine pyoderma treatment, from 30 days on the superficial or from 60 to 90 days (up to 6 months) in the case of deep pyodermas gives very good therapeutic results; despite this, antibacterial rotation is recommended in the face of recurrent cases in this disease to avoid resistance and preserve this antibiotic as a fundamental tool for the daily clinic.

DOSE:

Canines and Felines: 0.2 ml/kg body weight (25 mg/kg body weight) or 5 ml per 25 kg weight.

Dogs

The dose may vary depending on the bacteria and we can find doses from 22 mg to 60 mg / kg of weight, this will be decided by the veterinarian

The dosing time will also depend on the bacteria, in simple infections it is 5 to 10 days, in infections such as deep pyoderma it can be dosed up to 6 months.

ROUTE OF ADMINISTRATION: Oral.**Contraindications**

Cephalosporins are contraindicated in patients with a history of hypersensitivity to them. Because there may be a cross-reaction, use cephalosporins with caution in patients who are known to be hypersensitive to other beta-lactam antibiotics (such as: penicillins, cefamicin, carbapenems).

Oral systemic antibiotics should not be administered in patients with sepsis, shock or other serious TGI diseases as absorption of the drug in the gastrointestinal tract may be significantly delayed or decreased.

Cephalosporins have been shown to cross the placenta and the safe use of them during pregnancy has not been firmly established, but there have also been no documented teratogenic problems associated with these antibiotics. However, use only when the potential benefits outweigh the risks.

**Adverse effects**

In addition to the side effects listed below, cephalixin may lead to salivation, diarrhea, emesis, tachypnea and excitability in dogs and fever in cats. Nephrotoxicity rarely occurs during treatment with cephalixin, but patients with renal dysfunction, receiving other nephrotoxic drugs or geriatrics may be more susceptible. A hypersensitivity reaction has been seen in patients with interstitial nephritis.

Adverse effects with cephalosporins are usually not serious and have a relatively low frequency of occurrence. Non-dose-related hypersensitivity reactions may occur with these agents and may manifest as rashes, fever, eosinophilia, lymphadenopathy, or anaphylaxis. The use of cephalosporins in patients with hypersensitivity to antibiotics of the penicillin class is controversial; in humans, it is estimated that 1-15% of patients with hypersensitivity to penicillins will also be hypersensitive to cephalosporins. The incidence of cross-reactivity in veterinary patients is unknown.

When administered orally, cephalosporins may cause gastrointestinal effects (anorexia, vomiting, diarrhea). Administering the drug with a small meal may help relieve these symptoms. Because cephalosporins can also alter the intestinal flora, antibiotic-associated diarrhea can occur, as well as the selection of resistant bacteria that maintain residence in the animal's colon.

Drug interactions

The joint use of parenteral aminoglycosides or other nephrotoxic drugs (amphotericin B) with cephalosporins is controversial. Potentially, cephalosporins could cause nephrotoxicity when used with these drugs, but this interaction has only been well documented with cephaloridine (and they are no longer marketed). However, they should be used together with caution.

In vitro studies have shown that cephalosporins can be synergistic and/or additive against certain bacteria when used with aminoglycosides, but are not recommended with bacteriostatic antibiotics.

WARNINGS

Once the mixture is made, the suspension is kept for 5 days at room temperature and 7 days in refrigeration. Do not use in patients allergic to the ingredient of the formula. Salivation, tachypnea nausea, anorexia and excitability may occur in dogs, in cats nausea, anorexia, emesis and fever.

Keep in a dry place, cool at no more than 30°C and protected from direct sunlight. Do not leave it within reach of children, pets and disabled people.

Consult the Veterinary Zootechnician Exclusive literature for Veterinarians. Its sale requires a prescription.
Content managers: Technical Department.

Bibliography

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