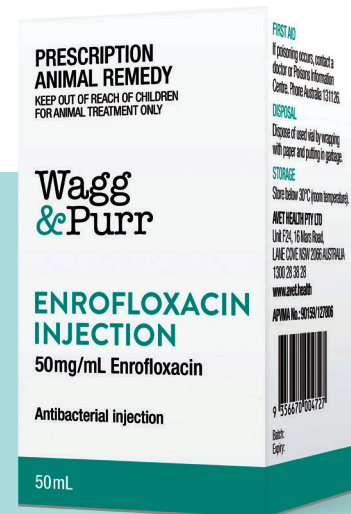


TECHNICAL NOTES

Wagg&Purr®

Enrofloxacin Injection



Active Constituents

Enrofloxacin 50 mg/mL

Actions

Wagg & Purr® Enrofloxacin Injection is a fluoroquinolone antibiotic for the treatment of diseases caused by susceptible pathogens in dogs and cats. It has antibacterial activity against a broad spectrum of Gram-negative and Gram-positive bacteria, including *Mycoplasma*. It is rapidly absorbed from the digestive tract, penetrating all measured body tissues and fluids.

Microbiology

Enrofloxacin exerts bactericidal activity by interaction with the A-subunit of DNA gyrase in the target bacteria. The DNA gyrase is a topoisomerase which controls bacterial replication i.e., it catalyses supercoiling by rewinding and re-joining of chromosomal DNA strands. Fluoroquinolones also possess activity against bacteria in the stationary phase, by an alteration of the permeability of the outer phospholipid layer of the cell wall. These mechanisms of action explain the rapid loss of viability of susceptible bacteria. With enrofloxacin, inhibitory and bactericidal concentrations are closely correlated. They are identical or differ in many cases within one or two dilution steps at maximum.

Enrofloxacin possesses antimicrobial activity at low concentration against most Gram-negative bacteria, many Gram-positive bacteria and against mycoplasmas. Enrofloxacin is therefore active against the micro-organisms that are primarily or secondarily involved in many of the infectious diseases which occur in small animals.

Distribution and Metabolism

Enrofloxacin penetrates all canine and feline tissues and body fluids. Concentrations of drug equal to or greater than the MIC for many pathogens are reached in most tissues within 2 hours of dosing and are maintained for 8 hours after dosing. Particularly high levels of enrofloxacin are found in urine. Following an oral dose in dogs, enrofloxacin reaches its peak serum level in one hour. The elimination half-life is greater than 3 hours at 2.5 mg/kg. Approximately 80% of the orally administered dose enters the systemic circulation unchanged. The eliminating organs, based on the drug's body clearance time, can readily remove the drug with no indication that the eliminating mechanisms are saturated. The primary route of excretion is via the urine.

Indications

Primary indications for use in dogs and cats include:

- Urinary tract infections with *E. coli*, *Proteus* spp., *Klebsiella* spp., *Pseudomonas aeruginosa*, *Staph* spp., and Group D *Streptococcus*.
- Respiratory infections, including infections with *E. coli*, *Streptococcus* spp., *Pasteurella* spp., *Klebsiella* spp., *Pseudomonas* spp., *Bordetella bronchiseptica*, *Staph* spp.
- Deep pyodermas caused by *Staph. intermedius* including those infected with secondary invaders.
- Wounds, abscesses, and discharging sinuses.
- Especially useful in cats for treating serious antibiotic-resistant infections of the respiratory tract or genitourinary system, particularly chronic urinary tract infections. In cats, it is also useful for deep pyodermas, osteomyelitis, and Gram-negative septicaemias.

Wagg & Purr® Enrofloxacin Injection may also be used in exotic animals (small mammals, reptiles, and avian species) for the treatment of bacterial infections of the alimentary and respiratory tract where clinical experience, supported where possible by sensitivity testing of the causal organism, indicates enrofloxacin as the drug of choice.

Restraints

DO NOT USE Wagg & Purr® Enrofloxacin Injection in food-producing species. This product is for use only in companion animals where culture and sensitivity testing indicate no suitable alternative.

Contraindications

Dogs

The use of enrofloxacin is contraindicated in dogs during the rapid growth phase. Enrofloxacin should not be used in dogs under 1 year of age. Giant breeds may be in the rapid growth phase for up to 18 months. Care should be used in treating these breeds with enrofloxacin when they are younger than 18 months.

Cats

Enrofloxacin should not be used in cats less than 12 weeks old. The safe use of enrofloxacin has not been established in breeding female cats.

Precautions

Although rare, it is prudent to consider that any fluoroquinolone has the potential to induce retinal degeneration in cats, especially when used above label dose rates or in animals that may be elderly or suffering from renal or hepatic disease.

Dosage & Administration

Use the vial within 28 days of broaching.

Dogs & Cats

The optimum dose in dogs and cats is 5 mg/kg bodyweight (1 mL per 10 kg bodyweight) administered once daily, subcutaneously, and normal sterile precautions should be taken. In simple infections treatment should be continued for 2-3 days beyond the cessation of clinical signs. If no improvement is seen within 5 days, the diagnosis should be re-evaluated, and a different course of therapy considered.

In deep or complex infections, e.g. pyodermas, discharging sinuses, extended courses may be required, and progress should be regularly reviewed.

Exotic Animals

Species	Dosage	Route	Dose Frequency	Treatment Duration
Small mammals	5 mg/kg	SC	Twice daily	7 days
Reptiles	5 mg/kg	IM	24-48 hr intervals	6 days
Avian spp.	10 mg/kg	IM	Twice daily	7 days

Drug Interactions

Dogs

Enrofloxacin has been administered to dogs concurrently with a wide variety of other products including anthelmintics (praziquantel, febantel, sodium disphenol), insecticides (fenthion, pyrethrins), heartworm preventatives (diethylcarbamazine), and other antibiotics (ampicillin, gentamicin sulphate, penicillin, dihydrostreptomycin). No incompatibilities with other drugs are known at this time, except that fluoroquinolones may interfere with the metabolism of theophylline and related drugs (e.g., aminophylline) so the dosage of theophylline may need to be reduced.

Cats

Enrofloxacin was administered concurrently with anthelmintics (praziquantel, febantel), a carbamate insecticide (propoxur), and another antibacterial (ampicillin). No incompatibilities with other drugs are known at this time.

Animal Safety

Dogs

Adults

Dogs receiving enrofloxacin at 12.5 mg/kg (2.5X) twice daily or 25 mg/kg (5X) daily for 28 and 30 days respectively showed no abnormalities. Dogs dosed at 52 mg/kg (10X) for 13 weeks showed only isolated incidences of vomiting and inappetence. Dosages of 125 mg/kg (25X) are toxic and may be lethal if given repeatedly.

Growing Dogs

Oral treatment of 15- to 28-week-old growing puppies with daily dosages of 25 mg/kg has induced abnormal carriage of the carpal joint and weakness in the hindquarters. However significant improvement of clinical signs is observed following drug withdrawal. Microscopic studies have identified lesions of the articular cartilage following 30 day treatments at either 5, 15, or 25 mg/kg in this age group.

General Safety

Tests indicated no effect on circulating microfilariae or adult heartworms. Enrofloxacin injection has no effect on cholinesterase levels.

Reproduction

No abnormalities in reproductive parameters were observed when male dogs received 10 consecutive daily treatments of 15 mg/kg/day at 3 intervals (90, 45 and 14 days) prior to breeding. Nor when female dogs received 10 consecutive daily treatments of 15 mg/kg/day at 4 intervals: between 30 and 0 days prior to breeding, early pregnancy (between 10th and 30th days), late pregnancy (between 40th and 60th days), and during lactation (the first 28 days).

Cats

Adults

Cats receiving 50 mg/kg (10X) of enrofloxacin for 6 days showed clinical signs of vomiting, inappetence, incoordination and convulsions, but returned to normal on withdrawal of the drug. Dosages of 125 mg/kg (25X) for 5 consecutive days induced vomiting, depression, incoordination and led to death.

Growing Cats

Cats in age ranges 3 to 4 months and 7 to 10 months received daily treatments of 25 mg/kg (5X) for 30 consecutive days with no adverse effects. Occasional vomiting was seen in 7- to 10-month-old cats during 30 days of consecutive dosing at 5, 15, or 25 mg/kg. Growing kittens 5 to 7 months old showed articular cartilage lesions when dosed with 25 mg/kg (5X) for 30 days but no lesions were seen at 15 mg/kg (3X) for 30 days.

Exotic Species

In the absence of data on its use in some exotic species, caution should be used when prescribing during pregnancy or lactation in small mammals and a careful risk/benefit assessment made.

Adverse Reactions

Dogs

Two of the 270 (0.7%) dogs treated orally with enrofloxacin in clinical field studies exhibited side effects, which were apparently drug related. These two cases of vomiting were self-limiting. No drug related side effects were reported in 122 clinical cases related to enrofloxacin injection and enrofloxacin tablets.

Cats

No drug related side effects were reported in 124 cats treated with enrofloxacin tablets in clinical field studies.

Exotic Species

Muscle bruising in reptiles and birds after injection has been reported occasionally.

Safety Data Sheet

For Safety Data Sheet see www.avet.health

First Aid

If poisoning occurs, contact a doctor or phone the Poisons Information Centre on 13 11 26.

Presentation

50 mL multi-use glass vial

Disposal

Dispose of the container by wrapping with paper and placing in the garbage.

Storage

Store below 30 °C (room temperature).

Poisons Schedule

S4

Registration Number

APVMA Approval Number: 90159

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