

LEEFLOX 1.5% EYE DROPS

DESCRIPTION

Leeflox (Levofloxacin) 1.5% Eye Drops is a pale yellow, sterile topical ophthalmic solution. Levofloxacin is a fluoroquinolone antibacterial that is more soluble in water at neutral pH than ofloxacin.

COMPOSITION

Each mL of Leeflox (Levofloxacin) 1.5% Eye Drops contains 15.36 mg of Levofloxacin hemihydrate equivalent to 15 mg Levofloxacin.

CLINICAL PHARMACOLOGY

Pharmacokinetics

Levofloxacin concentration in plasma was measured in 14 healthy adult volunteers during a 16-day course of treatment with Levofloxacin 1.5% Eye Drops. Maximum mean Levofloxacin concentrations increased from 3.22 ng/mL on Day 1 to 10.9 ng/mL on Day 16, which is more than 400 times lower than those reported after standard oral doses of Levofloxacin. Levofloxacin concentration in tears was measured in 100 healthy adult volunteers at various time points following instillation of 2 drops of Levofloxacin 1.5% Eye Drops. Mean tear concentration measured 15 minutes after instillation was 757 µg/mL.

Microbiology

Levofloxacin is the L-isomer of the racemate, ofloxacin, a quinolone antimicrobial agent. The antibacterial activity of ofloxacin resides primarily in the L-isomer. The mechanism of action of Levofloxacin and other fluoroquinolone antimicrobials involves the inhibition of bacterial topoisomerase IV and DNA gyrase, enzymes required for DNA replication, transcription, repair, and recombination.

Levofloxacin has *in vitro* activity against a wide range of Gram-negative and Gram-positive ocular pathogens and is often bactericidal at concentrations equal to or slightly greater than inhibitory concentrations.

Levofloxacin has been shown to be active against most strains of the following microorganisms, both *in vitro* and in clinical infections:

GRAM-POSITIVE BACTERIA:

- *Corynebacterium* species
- *Staphylococcus aureus*
- *Staphylococcus epidermidis*
- *Streptococcus pneumoniae*
- Viridans group streptococci

GRAM-NEGATIVE BACTERIA:

- *Pseudomonas aeruginosa*
- *Serratia marcescens*

INDICATIONS AND USAGE

Leeflox (Levofloxacin) 1.5% Eye Drops is indicated for the treatment of corneal ulcer caused by susceptible bacteria and other serious ocular infections.

CONTRAINDICATIONS

Leeflox 1.5% Eye Drops is contraindicated in patients with a history of hypersensitivity to Levofloxacin, to other quinolones, or to any of the components in this medication.

DRUG INTERACTIONS

Specific drug interaction studies have not been conducted with Leeflox (Levofloxacin) 1.5% Eye Drops. However, the systemic administration of some quinolones has been shown to elevate plasma concentrations of theophylline, interfere with the metabolism of caffeine, and enhance the effects of the oral anticoagulant warfarin, and has been associated with transient elevations in serum creatinine in patients receiving systemic cyclosporine concomitantly.

WARNINGS

Leeflox (Levofloxacin) 1.5% Eye Drops is not for injection and hence the solution should not be injected subconjunctivally, nor should it be introduced directly into the anterior chamber of the eye.

In patients receiving systemic quinolones, hypersensitivity (anaphylactic) reactions have been reported, some following the first dose. If an allergic reaction to Levofloxacin occurs, discontinue the drug and administer immediate emergency treatment.

PRECAUTIONS

As with other anti-infectives, prolonged use may result in overgrowth of non-susceptible organisms, including fungi. If super-infection occurs, discontinue use and institute alternative therapy.

Patients should be advised not to wear contact lenses if they have signs and symptoms of corneal ulcer.

Carcinogenesis, Mutagenesis, Impairment of Fertility

In a long-term carcinogenicity study in rats, Levofloxacin exhibited no carcinogenic or tumorigenic potential following daily dietary administration for 2 years; the highest dose (100 mg/kg/day) was 100 times the highest recommended human ophthalmic dose. Levofloxacin was not found to be mutagenic in several laboratory assays.

Levofloxacin caused no impairment of fertility or reproduction in rats at oral doses as high as 360 mg/kg/day, corresponding to 400 times the highest recommended human ophthalmic dose.

PREGNANCY

There are no adequate and well-controlled studies in pregnant women. Leeflox (Levofloxacin) 1.5% Eye Drops should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS

Levofloxacin has not been measured in human milk but based upon data from ofloxacin, it is possible that Levofloxacin is excreted in human milk. Caution should be exercised when Levofloxacin 1.5% Eye Drops is administered to a nursing mother.

PEDIATRIC USE

Safety and effectiveness in children below the age of six years have not been established.

ADVERSE REACTIONS

The most frequently reported adverse events are: headache and a taste disturbance following instillation. Others include: decreased/ blurred vision, instillation site irritation/ discomfort, ocular infection, nausea, ocular pain/discomfort, and throat irritation.

DOSAGE AND ADMINISTRATION**Days 1 through 3:**

Instill one to two drops in the affected eye(s) every 30 minutes to 2 hours while awake and approximately 4 and 6 hours after retiring.

Day 4 through treatment completion:

Instill one to two drops in the affected eye(s) every 1 to 4 hours while awake.

PRESENTATION

Leeflox (Levofloxacin) 1.5% Eye Drops is supplied in a plastic bottle of 5 ml. The solution is pale yellow in colour.