(For the use only of a registered Medical Practitioner or a Hospital or a Laboratory)

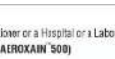
Ciprofloxacin Tablets USP (AEROXAIN 500)

COMPOSITION :

Each Film coated Tablet contains
Ciprofloxacin Hydrochloride USP
equivalent to Ciprofloxacin 500 mg
Excipients q.s

1. Description

Ciprofloxacin Film coated Tablets are fluoroquinolone antibacterial agents for oral administration. Ciprofloxacin Hydrochloride, USP is a fluoroquinolone, synthetic broad-spectrum antimicrobial agent. 1-cyclopropyl-6-fluoro-1, 4-dihydro-4-oxo-7-(1-piperazinyl)-quinoline-3-carboxylic acid. It is a faintly yellow to light yellow crystalline substance with a molecular weight of 385.8. Its empirical formula is $C_{17}H_{18}FN_3O_3$ and its chemical STRUCTURE is as follows:



Ciprofloxacin Film coated Tablets are available in 250 mg and 500 mg (Ciprofloxacin equivalent) strengths. CIPROXAIN is an off-white to slightly yellowish, Film coated tablet containing as constituents, microcrystalline cellulose, silicon dioxide, croscarmellose, magnesium stearate, hypromellose, titanium dioxide, and polyethylene glycol.

2. Indications and usage: Ciprofloxacin Film coated Tablets are indicated for the treatment of the following infections. Special attention should be paid to available information on resistance to ciprofloxacin when prescribing or dispensing this product.

Consideration should also be given to official guidance on the appropriate use of antibacterial agents.

Adults

Lower respiratory tract infections due to Gram-negative bacteria:
- exacerbations of chronic obstructive pulmonary disease
- bronchiolitis or pneumonia associated with cystic fibrosis in bronchiectasis
- pneumonia

Chronic suppurative otitis media

Acute exacerbation of chronic sinusitis especially if these are caused by Gram-negative bacteria

Urinary tract infections

Genital tract infections

gonococcal urethritis and cervicitis due to susceptible Neisseria gonorrhoeae

acute pelvic inflammatory disease including cases due to Neisseria gonorrhoeae

prostatitis including cases due to Neisseria gonorrhoeae

Infections of the peritoneal cavity

Infections of the skin

Infections of the skin and soft tissues caused by Gram-negative bacteria

Malignant external otitis

Infections of the bones and joints

Prophylaxis of invasive infections due to N. meningitidis

Renal and urinary tract

Infections of urinary tract exposure prophylaxis and catheter treatment

Ciprofloxacin may be used at the discretion of the prescriber if it is considered that the organisms causing the infection may be due to bacterial infection.

Children and adolescents

Bronchopulmonary infections in cystic fibrosis caused by Pseudomonas aeruginosa

Complicated urinary tract infections and pyelonephritis

Infections and exposure prophylaxis in neutropenic patients

Ciprofloxacin may also be used if medical advice indicates that the risk of severe infection is considered to be so serious. Treatment should be initiated only by physicians who are experienced in the treatment of cystic fibrosis and/or severe infections in children and adolescents.

3. Contraindications

Hypersensitivity to the active substance, to other quinolones or to any of the excipients listed.

4. Posology and method of administration

Posology

The dosage is determined by the indication, the severity and the site of the infection, the susceptibility of the pathogens and the condition of the patient, the renal function and the patient's age and weight. The duration of treatment depends on the severity of the illness and on the clinical and bacteriological course.

Treatment of infections due to certain bacteria (e.g. Pseudomonas aeruginosa, Acinetobacter or Staphylococci) may require higher ciprofloxacin doses and co-administration with other appropriate antibacterial agents.

Oral ciprofloxacin doses and co-administration with other appropriate antibacterial agents:

Treatment of bone and joint infections (e.g. pelvic inflammatory disease, intra-abdominal infections, infections in neutropenic patients and infections of bones and joints) may require co-administration with other appropriate antibacterial agents depending on the pathogens involved.

In patients with impaired renal function, no dose adjustment is required.

Dosage guide for adults with impaired renal function or haemodialysis patients is included.

Method of administration

Tablets are to be swallowed and have a bitter taste. They can be taken independent of mealtimes. If taken on an empty stomach, the active substance is absorbed more rapidly. Ciprofloxacin tablets should not be taken with dairy products (e.g. milk, yoghurt) or mineral-fortified fruit juice (e.g. calcium-fortified orange juice) as serious cases of little absorption are possible. Film coated tablets (e.g. patients on enteral nutrition), it is recommended to commence therapy with intravenous ciprofloxacin until a switch to oral administration is possible.

5. Warning and Precautions:

Severe infections and their clinical course with

Cystic fibrosis and complicated infections

Ciprofloxacin monotherapy is not indicated for treatment of severe infections or infections that may be due to Gram-positive or anaerobic pathogens, in such

infections ciprofloxacin should be combined with other appropriate antibacterial agents.

Staphylococcal infections in cystic fibrosis

Ciprofloxacin

Ciprofloxacin is not recommended for the treatment of staphylococcal infections due to methicillin-resistant strains.

Gastrointestinal infections

Chronic gastrointestinal diseases, cirrhosis, cholecystitis and

cases of terminal illnesses may be cause clinically significant deficiencies in ciprofloxacin absorption.

Therefore, ciprofloxacin should not be administered for the treatment of gastrointestinal infections or cases in which any of a combination of multi-resistant Mycobacterium tuberculosis can be exactly ind.

Patients with cystic fibrosis and acute pulmonary diseases, simultaneous ciprofloxacin should only be considered in combination with another appropriate antibacterial agent.

(e.g., a cephalosporin) is a source of ciprofloxacin-resistant

Pseudomonas aeruginosa strains are recorded. If it could improve results in not achieve after 3 days of treatment, the therapy should be considered.

Urinary tract infections

Resistance to this antibacterial in Escherichia coli

Most common pathogens involved in urinary tract infections – varies across the European Union. Prescribers are advised to

[illegible]

consider the local prevalence of resistance in Escherichia coli with regard to fluoroquinolones.

The single dose of ciprofloxacin that may be used in uncomplicated cystitis in pre-menopausal women is expected to be associated with

lower efficacy than the longer treatment duration. This should the more to be taken into account as regards the increasing resistance levels of bacteria that are the cause of cases.

Sexually transmitted infections

There are limited data on the efficacy of ciprofloxacin in the treatment of non-surgical sexually transmitted infections.

Travelers' diarrhoea

The choice of ciprofloxacin should take into account information on resistance to ciprofloxacin in relevant pathogens in the countries visited.

Infections of the bones and joints

Ciprofloxacin should be used in combination with other antimicrobial agents depending on the results of the microbiological examination.

Intravenous administration

Use in humans is based on effective systemic data and on minimal experimental data together with limited human data. Treating physicians should consider intravenous administration based on the treatment of serious, life-threatening infections.

Paediatric population

The use of ciprofloxacin in children and adolescents should follow available official guidance. Ciprofloxacin treatment should be considered only for patients with severe infections in children and adolescents.

Ciprofloxacin has been shown to cause arthropathy in weight-bearing joints of immature animals. Safety data from a randomised double-blind study on ciprofloxacin use in children (ciprofloxacin n= 335, median age = 5.9 years; comparators n = 349, mean age = 6.2 years; age range = 1 to 17 years) revealed an increased incidence of suspected drug-related arthropathy observed from 3 to 6 months of overall targets or symptoms by Day 14 (0.1 % [1/335] and 0.6% [2/349]). Respectively, an incidence of drug-related arthropathy 1 year after follow-up was 0.9% and 0.7%.

The incidence of suspected drug-related arthropathy cases over time was not statistically significant between groups. Treatment of cystic fibrosis-related pneumonia and other severe cases (benefit/risk evaluation, due to possible adverse events related to joints and/or surrounding tissue.

Arrhythmia-associated adverse reactions in pediatric patients

Clinical trials when included children and adolescents aged 5-17 years. Minor limited experience is available in treating children suffering of arrhythmia or cystic fibrosis.

Staphylococcal urinary tract infections and gonococcal urethritis

Ciprofloxacin treatment of urinary tract infections should be considered before other treatments cannot be used, and should be based on the

results of the microbiological documentation. Clinical trials have included children and adolescents aged 1-17 years. Efficacy and safety are demonstrated.

Other severe infections in accordance with official guidelines, or other careful benefit-risk evaluation when other treatments cannot be used, or after failure of conventional therapy and when the results of bacteriological documentation can justify a ciprofloxacin use.

The use of ciprofloxacin for specific severe infections other than those mentioned above has not been evaluated in clinical trials and the risk of adverse reactions is limited. Consequently, caution is advised when treating patients with these infections.

Phototoxicity

Phototoxicity and other skin reactions, including photosensitivity and skin rashes, may occur following a single dose, even in the life-threatening. If such reactions occur, ciprofloxacin should be discontinued and adequate medical treatment required.

Musculoskeletal System

Ciprofloxacin should generally not be used in patients with a history of tendon disorders related to fluoroquinolone treatment. Nevertheless, in very rare instances, after microbiological documentation of the causative organism and evaluation of the risk/benefit balance, ciprofloxacin may be prescribed for these patients for the treatment of certain severe infections, particularly in the event of failure of the standard therapy or bacterial resistance, where microbiological data may justify the use of ciprofloxacin.

Tendinitis or a tendon rupture (especially Achilles tendons), sometimes bilateral, may occur within a few days, as soon as the first 48 hours of treatment. Information on the occurrence of tendon rupture occurs even up to several months after discontinuation of ciprofloxacin therapy. The risk of tendinopathy may be increased in elderly patients or patients concomitantly treated with corticosteroids.

At the sign of tendinitis (e.g. painful swelling, inflammation), ciprofloxacin treatment should be discontinued. Care should be taken to keep the affected limb at rest.

Ciprofloxacin should be used with caution in patients with myasthenia gravis because symptoms can be exacerbated.

Photosensitivity

Ciprofloxacin has been shown to cause photosensitivity reactions. Patients taking ciprofloxacin should be advised to avoid direct exposure to other sources of sunlight or UV radiation during treatment.

Central Nervous System

Ciprofloxacin MEDIFIR questionnaires are known to trigger seizures or lower the seizure threshold. Cases of status epilepticus have been reported. Ciprofloxacin should be used with caution in patients with CNS disorders which may be predisposed to seizure. If seizures occur, ciprofloxacin should be discontinued. Psychotic reactions may occur even after the first administration of ciprofloxacin. In rare cases, depression or psychosis can progress to suicidal thoughts or self-injurious behavior, such as completed suicide. In the occurrence of such cases, ciprofloxacin should be discontinued.

Cases of polyneuropathy (based on neurological symptoms such as pain, burning, paresthesia, disturbances or sensory weakness, which or in combination) have been reported in patients receiving ciprofloxacin. Ciprofloxacin should be discontinued in patients experiencing symptoms of neuropathy, including pain, burning, tingling, numbness and/or weakness in order to prevent the development of an irreversible condition.

Cardiac disorders

Caution should be taken when using fluoroquinolones including ciprofloxacin, in patients with known risk factors for prolongation of the QT interval such as, for example:

congenital long QT syndrome concomitant use of drugs that are known to prolong the QT interval (e.g. Class IA and III antiarrhythmics, tricyclic antidepressants, macrolides, antipsychotics) uncorrected electrolyte imbalance (e.g. hypokalaemia, hypomagnesaemia)

cardiac disease (e.g. heart failure, myocardial infarction, bradycardia). Elderly patients and women may be more sensitive to QT-prolonging medications. Extreme caution should be taken when using fluoroquinolones, including ciprofloxacin, in these populations.

Hypoglycaemia

As with other quinolones, hypoglycaemia has been reported most often in diabetic patients, predominantly in the elderly population. In diabetic patients, careful monitoring of blood glucose is recommended.

Gastrointestinal System

The occurrence of severe and persistent diarrhoea during or after treatment (including several weeks after treatment) may indicate an antibiotic-associated colitis. Life-threatening will cause life-threatening outcomes, requiring immediate treatment. In such cases, ciprofloxacin should immediately be discontinued, and an appropriate therapy initiated. Anti-peristaltic drugs are contraindicated in this situation.

Musculoskeletal System

Cases of tendinitis, sometimes bilateral, have been reported in patients with glucose-6-phosphate dehydrogenase deficiency. Ciprofloxacin

should be avoided in these patients unless the potential benefit is considered to outweigh the possible risk. In this case, care should be taken to monitor for any signs of tendon damage.

Anaphylaxis

During or following a course of treatment with ciprofloxacin, it is clear that demonstrate sensitization to ciprofloxacin may be reactive, with or without a clinically apparent superinfection. There may be a particular risk of sensitivity for ciprofloxacin-resistant bacteria causing opportunistic infections of treatment and whether breakthrough occurred which concerning infections caused by Streptococcus or Staphylococcus species.

Glucose-6-Phosphate (P6G)

Ciprofloxacin - Fatty CYP450 and may may cause increased serum concentration of cross reactive substances and substances metabolized by this enzyme (e.g. theophylline, clozapine, tizanidine, ropinirole, fenbufen, duloxetine, agomelatine). Co-administration of ciprofloxacin and tizanidine is contraindicated. Therefore patients taking these substances concomitantly with ciprofloxacin should be monitored closely for clinical signs of overdose, and determination of serum concentrations of a theophylline may be necessary.

Antibiotics

The concomitant use of ciprofloxacin with other antibiotics is not recommended.

Urinary Crystals

There will be activity of ciprofloxacin against Mycobacterium tuberculosis is likely give false negative bacteriological test results in specimens from patients by verifying drug-resistance.

Mycobacterium

Tendinitis or tendon rupture may occur in any of tendons, in the rotator cuff, and in the Achilles tendon, or in any other tendon, and may occur within a few days after the start of treatment with ciprofloxacin. Tendinitis and tendon rupture