Ciprogen drug essay

Broad-spectrum antimicrobial drug of fluoroquinolone group with bactericidal action. Inhibits DNA gyrase and inhibits the synthesis of bacterial DNA. Highly active against most gram-negative bacteria: Pseudomonas aeruginosa, Haemophilus influenzae, Escherichia coli, Shigella spp. , Salmonella spp. , Neisseria meningitidis, Neisseria gonorrhoeae. It is active against Staphylococcus spp. (including strains producing and not producing penicillinase, methicillin-resistant strains), some strains of Enterococcus spp. Campylobacter spp. , Legionella spp. , Mycoplasma spp. , Chlamydia spp. , Mycobacterium spp. ciprofloxacin is active against bacteria producing beta-lactamases. Ureaplasma urealyticum, Clostridium difficile, Nocardia asteroides resistant to ciprofloxacin. The effect on Treponema pallidum is studied not enough. Pharmacokinetics Rapidly absorbed from the gastrointestinal tract. Bioavailability after oral administration of 70%. Eating has a little effect on the absorption of ciprofloxacin. Plasma protein binding is 20-40%.

Distributed in tissues and body fluids. It penetrates the cerebrospinal fluid: the concentration of ciprofloxacin for not inflamed meninges reach 10% with inflammation – up to 37%. High concentrations are achieved in bile. Excreted in the urine and bile. Why is Ciprogen prescribed? Infectious-inflammatory diseases caused by microorganisms susceptible to ciprofloxacin, including respiratory diseases, diseases of abdominal and pelvic organs, bones, joints, skin, septicemia; severe infections of ENT organs.

Treatment of postoperative infections. Prevention and treatment of infections in patients with reduced immunity. For local use: acute and subacute conjunctivitis, blepharoconjunctivitis, blepharitis, bacterial corneal

ulcers, keratitis, keratoconjunctivitis, chronic dacryocystitis, meybomity. Infectious lesions in the eyes from injury or contact with foreign bodies. Preoperative prophylaxis in ophthalmic surgery. Dosage and administration Individual. For oral administration dose is 250-750 mg 2 times / day.

Treatment duration is from 7-10 days to 4 weeks. For IV administration a single dose is 200-400 mg, the multiplicity of the introduction is 2 times / day, duration of treatment – 1-2 weeks and more if necessary. May be IV injected as jet but more preferably a drip for 30 minutes. When applied topically instilled 1-2 drops into the lower conjunctival sac of the affected eye every 1-4 hours. After improving the intervals between instillation can be increased. The maximum oral daily dose for adults is 1. 5 g. Ciprogen side effects

Digestive system: nausea, vomiting, diarrhea, abdominal pain, increase in liver transaminases, alkaline phosphatase, LDH, bilirubin, pseudomembranous colitis. CNS: headache, dizziness, fatigue, insomnia, nightmares, hallucinations, fainting, disorders of vision. Urinary system: crystalluria, glomerulonephritis, dysuria, polyuria, albuminuria, hematuria, transient increase of serum creatinine. Hemopoietic system: eosinophilia, leukopenia, neutropenia, changes in the number of platelets. Cardiovascular system: tachycardia, cardiac arrhythmias, hypotension.

Allergic reactions: itching, urticaria, Quincke’s edema, Stevens-Johnson syndrome, arthralgia. Adverse reactions associated with the chemotherapeutic effect: candidiasis. Local reactions: pain, phlebitis (for IV injections). When applying eye drops in some cases may be mild pain and

conjunctival hyperemia. Other: vasculitis. Contraindications Pregnancy, lactation (breastfeeding), childhood and adolescence to 15 years, increased sensitivity to ciprofloxacin and other drugs hinolonovogo series; deficiency of glucose-6-phosphate dehydrogenase; in ophthalmology: viral keratitis. Restrictions to using

Pronounced cerebral arteriosclerosis, cerebral circulatory disorder, mental illness, epilepsy, epileptic syndrome, marked renal and / or hepatic insufficiency. Using during pregnancy and breastfeeding Contraindicated in pregnancy (safety and efficacy in women during pregnancy has not been established); ciprofloxacin crosses the placenta, excreted in breast milk. In experimental studies found that it causes arthropathy. In experiments on rats and mice treated with ciprofloxacin in doses exceeding the usual daily dose for a person 6 times, adverse effects on the fetus is not revealed.

In experiments on rabbits treated with oral dose of ciprofloxacin 30 and 100 mg / kg, it is shown that the drug causes disruption of the gastrointestinal tract, leading to loss of body weight in females and increase the number of miscarriages but teratogenicity not found. When IV introduction to the doses of 20 mg / kg ciprofloxacin did not exert toxic effects on the mother and embryo, showed no teratogenicity.

The use of local forms of ciprofloxacin in pregnancy is possible if the anticipated benefits exceed the potential risk to the fetus. Category of the fetus by FDA – C. iprofloxacin is excreted in breast milk, so the period of lactation should decide, stop taking ciprofloxacin or breastfeeding based on the degree of importance of the use of drugs for the mother. With careful use

of local forms of ciprofloxacin in breast-feeding (not known whether ciprofloxacin is excreted in breast milk when applied topically). Special instructions Patients with impaired renal function requires correction dosing regimen. With caution used in elderly patients, with cerebral arteriosclerosis, cerebral circulatory disorders, epilepsy, convulsive syndrome of unknown etiology.

During treatment patients should receive enough amounts of liquids. In the case of persistent diarrhea ciprofloxacin should not be taken. At the same time of ciprofloxacin IV introduction and barbiturates is necessary to monitor heart rate, blood pressure, ECG. In the course of treatment is necessary to monitor blood concentrations of urea, creatinine, hepatic transaminases. In the period of treatment may decrease the reactivity (especially when used with alcohol). Not allowed the introduction of ciprofloxacin subconjunctival or directly into the anterior chamber of the eye.

Precautionary measures Due to the threat of adverse reactions from the CNS ciprofloxacin should be used only according to the life in the pathology of the CNS in history: organic brain lesions, epilepsy, lowering the convulsive threshold, severe atherosclerosis of the brain (risk of circulatory disorders, stroke), the elderly, with severely impaired renal function and liver (requires monitoring concentrations in blood plasma). Patients with allergic reactions to fluoroquinolone derivatives in history may develop reactions to ciprofloxacin.

During the period of treatment should avoid sunlight and UV radiation, intense physical exercise, control of drinking mode, pH of urine. Reported

cases of crystalluria, particularly in patients with alkaline reaction of urine (pH 7 or more). In order to avoid the development of crystalluria unacceptable excess of the recommended daily dose, should also be adequate fluid intake and maintaining acidic urine. If you have pain in the tendons or the first signs tendovaginitah treatment should be discontinued (described isolated cases of inflammation or tendon rupture during fluoroquinolone treatment).

It can reduce the speed of psychomotor reactions, especially against the backdrop of alcohol, that should be considered for patients who work with potentially dangerous machinery or drive vehicles. If you have severe diarrhea, pseudomembranous colitis should be excluded (for which ciprofloxacin is contraindicated). At the same time of barbiturates IV injections requires monitoring function of the cardiovascular system (heart rate, BP, ECG). Teenagers under 18 years shall be appointed only if the pathogen resistance to other chemotherapeutic drugs.

The solution in the form of eye drops are not designed for intraocular injections. The use of other ophthalmic means the interval between injections should be at least 5 minutes. Ciprogen drug interactions Activity increases when combined with beta-lactam antibiotics, aminoglycosides, vancomycin, clindamycin, metronidazole. Sukralfat, bismuth preparations, antacids containing aluminum ions, magnesium or calcium, cimetidine, ranitidine, vitamin and mineral supplement, iron sulfate, zinc, didanosine (recommended for 2 hours before or 4 hours after these drugs) reduce the suction.

Probenecid, azlocillin increase the concentration in the blood. Decreases clearance and increases in plasma caffeine, aminophylline and theophylline (increased likelihood of side effects). Enhances the effect of warfarin and other oral anticoagulants (prolongs bleeding time). Increases nephrotoxicity of cyclosporine, increase the risk of CNS excitability and convulsive reactions against the background of NSAIDs.

Medicines alkalinizing the urine (citrates, sodium bicarbonate, carbonic anhydrase inhibitors) reduce the solubility (increases the probability of crystalluria). Infusion solutions of ciprofloxacin ready to use can be combined with infusion solutions: 0. 9% sodium chloride solution, Ringer’s solution, Ringer lactate, 5 and 10% dextrose, 10% solution of fructose, and a solution containing 5% dextrose with 0, 225 or 0. 45% sodium chloride. Incompatible with solutions having a pH > 7. Ciprogen in case of emergency overdose.