HADZON™
(Ceftriaxone)
For Injection U.S.P.

250mg, 500mg, 1g & 2g
For I.V. Use

250mg & 500mg
For I.M. Use

ہیڈزون
(سیفٹرائیگزون)
انجکشن یو۔ایس۔پی۔

۲۵۰ ملی گرام، ۵۰۰ ملی گرام، ۱ گرام، ۲ گرام
وریدی استعمال کے لئے

۲۵۰ ملی گرام، ۵۰۰ ملی گرام
عضلاتی استعمال کے لئے

QUALITATIVE AND QUANTITATIVE COMPOSITION

HADZON™ Injection U.S.P. 250mg I.M.: Each vial contains: Ceftriaxone Sodium U.S.P. eq. to Ceftriaxone….250mg
HADZON™ Injection U.S.P. 500mg I.M.: Each vial contains: Ceftriaxone Sodium U.S.P. eq. to Ceftriaxone….500mg
HADZON™ Injection U.S.P. 250mg I.V.: Each vial contains: Ceftriaxone Sodium U.S.P. eq. to Ceftriaxone….250mg
HADZON™ Injection U.S.P. 500mg I.V.: Each vial contains: Ceftriaxone Sodium U.S.P. eq. to Ceftriaxone….500mg
HADZON™ Injection U.S.P. 1g I.V.: Each vial contains: Ceftriaxone Sodium U.S.P. eq. to Ceftriaxone….1g
HADZON™ Injection U.S.P. 2g I.V.: Each vial contains: Ceftriaxone Sodium U.S.P. eq.to Ceftriaxone….2g

DESCRIPTION:

Ceftriaxone is a sterile, semisynthetic, broad-spectrum cephalosporin antibiotic for intravenous or intramuscular administration.

CLINICAL PHARMACOLOGY

Mechanism of Action: Ceftriaxone is a bactericidal agent that acts by inhibition of bacterial cell wall synthesis.
Pharmacodynamics: Ceftriaxone inhibits bacterial cell wall synthesis following attachment to penicillin binding proteins (PBPs). This results in the interruption of cell wall (peptidoglycan) biosynthesis, which leads to bacterial cell lysis and death.
Pharmacokinetics: Absorption and Distribution: Ceftriaxone is completely absorbed following IM administration with mean maximum plasma concentrations occurring between 2 and 3 hours' post-dose.After intravenous bolus administration of ceftriaxone 500 mg and 1 g, mean peak plasma ceftriaxone levels are approximately 120 and 200 mg/l respectively. After intravenous infusion of ceftriaxone 500 mg, 1 g and 2 g, the plasma ceftriaxone levels are approximately 80, 150 and 250 mg/l respectively.
Metabolism and Elimination: 33% percent to 67% of a ceftriaxone dose was excreted in the urine as un-changed drug and the remainder was secreted in the bile and ultimately found in the feces as microbiologically inactive compounds.

INDICATIONS AND USAGE

Ceftriaxone is indicated for: Lower respiratory tract infections, Acute bacterial otitis media, Skin and skin structure infections, Urinary tract infection Uncomplicated gonorrhea, Pelvic inflammatory disease, Bacterial septicemia, Bone and joint infections, Intra-abdominal infections, Meningitis, Syphilis, Community acquired pneumonia, Hospital acquired pneumonia, Surgical prophylaxis, acute exacerbations of chronic obstructive pulmonary disease in adults, dis-seminated Lyme borreliosis (early (stage II) and late (stage III)) in adults and children including neonates from 15 days of age, In the treatment of patients with bacteremia.

CONTRAINDICATIONS

Hypersensitivity, Premature neonates Hyperbilirubinemia neonates, Neonates Requiring Calcium Containing IV Solutions, IV administration of ceftriaxone containing Lignocaine solution is contraindicated. When Lignocaine solution is used as sovent, administer as IM injection.

INTERACTIONS

Do not use with Calcium-containing diluents and Oral anticoagulants and bacterio-static antibiotics Ceftriaxone may result in Potential increase in renal toxicity of ami-no-glycosides, may adversely affect efficacy of Oral contraceptives and may also result in False-positive tests for galactosaemia.

USE IN SPECIFIC POPULATION

Pregnancy: Teratogenic Effects: Category B: Ceftriaxone crosses the placental barri-er. Ceftriaxone should only be administered during pregnancy and in particular in the first trimester of pregnancy if the benefit outweighs the risk. **Nursing Mothers:** Low concentrations of ceftriaxone are excreted in human milk. Caution should be exer-cised when Ceftriaxone Sodium is administered to a nursing woman. **Pediatric Use:** Ceftriaxone Sodium should not be administered to hyperbilirubinemia neonates, es-pecially prematures. **Geriatric Use:** No dosage adjustment is necessary for patients with impairment of renal or hepatic function. **Patients with Renal or Hepatic Impair-ment:** Ceftriaxone is excreted via both biliary and renal excretion. **Hepatic impair-ment:** Reduce dose if both hepatic and severe renal impairment. Monitor plasma concentration if both hepatic and severe renal impairment. **Renal impairment:** Use with caution in renal failure. Monitor plasma concentration if both hepatic and severe renal impairment.

PRECAUTIONS

Hypersensitivity Reactions: Before therapy with Ceftriaxone Sodium is instituted, careful inquiry should be made to determine whether the patient has had previous hy-persensitivity reactions to cephalosporins, penicillins and other beta-lactam agents or other drugs.

Clostridium Difficile-Associated Diarrhea: Clostridium difficile associated diarrhea (CDAD) has been reported.

Hemolytic Anemia: Severe cases of hemolytic anemia, including fatalities, have been reported during treat-ment in both adults and children.

Development of Drug-resistant Bacteria: Ceftriaxone Sodium may result in over-growth of nonsusceptible organisms.

Effect on Prothrombin Time: Alterations in prothrombin times have occurred in pa-tients treated with Ceftriaxone Sodium. Concomitant use of ceftriaxone with Vitamin K antagonists may increase the risk of bleeding.

Gallbladder Pseudolithiasis: Ceftriaxone-calcium precipitates in the gallbladder have been observed in patients receiving Ceftriaxone Sodium.

Urolithiasis and Post-Renal Acute Renal Failure: Patients may develop symptoms of urolithiasis, and ureteral obstruction and post-renal acute renal failure.

Pancreatitis: Cases of pancreatitis, possibly secondary to biliary obstruction, have been reported in patients treated with Ceftriaxone. Most patients presented with risk factors for biliary stasis and biliary sludge.

Sonographic abnormalities in the gallbladder: There have been reports of sono-graphic abnormalities in the gallbladder of patients treated with Ceftriaxone Sodium; some of these patients also had symptoms of gallbladder disease.

Effects on ability to drive and use machines: Patients should be cautious when driv-ing or operating machinery.

ADVERSE REACTIONS

Injection site pain, Phlebitis after IV administration, Hypersensitivity, genital fungal in-fections, eosinophilia, thrombocytosis, leukopenia, hemolytic anemia, diarrhea, loose stools, onset of pseudomembranous colitis symptoms, elevation of hepatic AST and ALT, headach, dizziness, vaginitis anaphylixis and decrease in prothrombin time.

Common or very common: Calcium ceftriaxone precipitates in gall bladder, consider discontinuation if symptomatic. Calcium ceftriaxone precipitates in urine (particularly in very young, dehydrated or those who are immobilized (consider discontinuation if symptomatic).

Rare: Pancreatitis, prolongation of prothrombin time.

DOSAGE AND ADMINISTRATION

ADULTS AND CHILDREN OVER 12 YEARS OF AGE (≥ 50 KG): For Community acquired pneumonia, Acute exacerbation of chronic obstructive pulmonary disease, Intra-abdominal infections and Complicated urinary tract infections (including pyelonephritis), dose is 1-2 g once daily. • For Hospital acquired pneumonia, Complicated skin and soft tissue infections and Infections of bones and joints dose is 2g once daily. • For Management of neutropenic patients with fever that is suspected to be due to a bacterial infection, Bacterial endocarditis and Bacterial meningitis dose is 2-4 g once daily. In documented bacteremia, the higher end of the recommended dose range should be considered. Twice daily (12 hourly) administration may be considered where doses greater than 2 g daily are administered. • **For Acute otitis media:** A single intramuscular dose of Ceftriaxone Sodium1-2 g can be given. • **For Pre-operative prophylaxis of surgical site infections:** 2 g as a single pre-operative dose. • **For Gonorrhoea:** 500 mg as a single intramuscular dose.• **For Syphilis:** The generally recommended doses are 500 mg-1 g once daily increased to 2 g once daily for neurosyphilis for 10-14 days. • **For Disseminated Lyme borreliosis (early [Stage II] and late [Stage III]):** 2 g once daily for 14-21 days. The recommended treatment durations vary and national or local guidelines should be taken into consideration.

NEONATES, INFANTS AND CHILDREN 15 DAYS TO 12 YEARS OF AGE (< 50 KG): For children with bodyweight of 50 kg or more, the usual adult dosage should be given. • **For Intra-abdominal infections,** Complicated urinary tract infections (including pyelonephritis), Community acquired pneumonia and Hospital acquired pneumonia, dose is 50-80mg/kg once daily. • **For Complicated skin and soft tissue infections,** Infections of bones and joints, Management of neutropenic patients with fever that is suspected to be due to a bacterial infection, dose is 50-100 mg/kg (Max 4 g) once daily. • **For Bacterial meningitis** dose is 80-100 mg/kg (max 4 g) once daily. • **For Bacterial endocarditis** dose is 100 mg/kg (max 4 g) once daily. **Infants and children 15 days to 12 years (< 50 kg) that require specific dosage schedules:**

• **For Acute otitis media:** For initial treatment of acute otitis media, a single intramuscular dose of Ceftriaxone Sodium 50 mg/kg can be given. Limited data suggest that in cases where the child is severely ill or initial therapy has failed, Ceftriaxone Sodium may be effective when given as an intramuscular dose of 50 mg/kg daily for 3 days.

• **Pre-operative prophylaxis of surgical site infections:** 50-80 mg/kg as a single pre-operative dose. • **For Syphilis:** The generally recommended doses are 75-100 mg/kg (max 4 g) once daily for 10-14 days. • **For Disseminated Lyme borreliosis (early [Stage II] and late [Stage III]):** 50–80 mg/kg once daily for 14-21 days. The recommended treatment durations vary and national or local guidelines should be taken into con-sideration. **NEONATES 0-14 DAYS:** Ceftriaxone Sodium is contraindicated in premature neonates up to a postmenstrual age of 41 weeks (gestational age + chronological age).• **For Intra-abdominal infections,** Complicated skin and soft tissue infections, Complicated urinary tract infections (including pyelonephritis), Community acquired pneumonia, Hospital acquired pneumonia, Infections of bones and joints And Management of neutropenic patients with fever that is suspected to be due to a bacterial infection, dose is 20-50 mg/kg. • **For Bacterial meningitis and Bacterial endocarditis,** dose is 50 mg/kg once daily. A maximum daily dose of 50 mg/kg should not be exceeded. **Indications for neonates 0-14 days that require specific dosage schedules:** • **For Acute otitis media:** For initial treatment of acute otitis media: a single intramuscular dose of Ceftriaxone Sodium 50 mg/kg can be given. • **For Pre-operative prophylaxis of surgical site infections:** 20-50 mg/kg as a single pre-operative dose. • **Syphilis:** The generally recommended dose is 50 mg/kg once daily for 10-14 days. **Duration of therapy:** The duration of therapy varies according to the course of the disease. As with antibiotic therapy in general, administration of ceftriaxone should be continued for 48 - 72 hours after the patient has become afebrile or evidence of bacterial eradication has been achieved. **Method of administration:** The use of freshly prepared solutions is recommended. **For intramuscular injection**: HADZONE 250mg I.M. and HADZONE 500mg I.M. is dissolved in

2ml of 1% Lidocaine Hydrochloride Injection, final concentration should be of 250–350 mg/mL. Dosages greater than 1 g should be divided and injected at more than one site.

For Intravenous injection and infusion: HADZONE 250mg I.V. and HADZONE 500mg I.V. is dissolved in 5ml of sterile water for injection While HADZONE 1 gm is dissolved in 10ml of sterile water for injection. For intravenous injection, give over at least 2–4 minutes. Give infusion over at least 30 minutes (60 minutes in neonates). Concentration between 10mg/ml and 40mg/ml is recommended. 2 g HADZONE is dissolved in 40 ml of one of the following calcium-free infusion fluids: sodium chloride 0.9%, sodium chloride 0.45% + dextrose 2.5%, dex-trose 5%, dextrose 10%, dextran 6% in dextrose 5%, hydroxyethyl-starch 6 – 10%, water for injections.

Overdosage: In overdose, the symptoms of nausea, vomiting & diarrhea can occur. Ceftriaxone concentrations cannot be reduced by hemodialysis or peritoneal dialysis. There is no specific antidote. Treatment of overdose should be symptomatic.

INSTRUCTION: Dosage as directed by the physicians.

Prior reconstitution: Store at 20°- 25°C, excursions permitted to 15°C - 30°C. Protect from light and moisture.

After reconstitution: May be stored for 6 hours at 25°C or 24 hours at 2°C - 8°C. injection should not be used if container is leaking, solution is cloudy or it contains undissolved particles. Prepared solution must be used immediately. Any unused portions of solutions should be discarded. Keep all medicines out of the reach of children.

PRESENTATION

HADZON (Ceftriaxone Sodium) for Injection U.S.P. 250mg I.M. is available as 1 glass vial packed with one ampoule of Lignocaine HCl Injection U.S.P. 1% w/v 2mL.

HADZON (Ceftriaxone Sodium) for Injection U.S.P. 500mg I.M. is available as 1 glass vial packed with one ampoule of Lignocaine HCl Injection U.S.P. 1% w/v 2mL.

HADZON (Ceftriaxone Sodium) for Injection U.S.P. 250mg I.V. is available as 1 glass vial packed with one ampoule of Water For Injection 5mL.

HADZON (Ceftriaxone Sodium) for Injection U.S.P. 500mg I.V. is available as 1 glass vial packed with one ampoule of Water For Injection 5mL.

HADZON (Ceftriaxone Sodium) for Injection U.S.P. 1gm I.V. is available as 1 glass vial packed with one ampoule of Water For Injection 10mL.

HADZON (Ceftriaxone Sodium) for Injection U.S.P. 2gm I.V. is available as 1 glass vial packed with one ampoule of Water For Injection 10mL.

ہدایات:

خوراک ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔

۲۰ سے ۲۵ ڈگری سینٹی گریڈ پر رکھیں، محفوظ رکھنے کی حد ۱۵ سے ۳۰ ڈگری سینٹی گریڈ ہے۔

سورج کی روشنی اور نمی سے محفوظ رکھیں۔

Manufactured for:

Genix Pharma (Pvt.) Ltd.

44,45-B, Korangi Creek Road, Karachi-75190, Pakistan.

UAN: +92-21-111-10-10-11, **Email:** info@genixpharma.com

ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

www.genixpharma.com

Manufactured by:

Daneen Pharma (Pvt.) Ltd.

27-Sundar Industrial Estate, Sundar Raiwind Road Lahore, Pakistan.

Tel: +92-42-35297781-2, **Email:** info@daneenpharma.com

ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

www.daneenpharma.com