

NETILMICIN

Indications/Uses

Listed in Dosage.

Dosage/Direction for Use

Adult : IV/IM Susceptible infections 4-6 mg/kg once daily or in equally divided doses given 8 or 12 hrly. Life-threatening infections: Up to 7.5 mg/kg/day in divided doses 8 hrly. Usual duration: 7-14 days. UTI 150 mg as a single daily dose for 5 days. Complicated UTI: 3-4 mg/kg/day in divided doses 12 hrly. Usual treatment duration: 7-14 days.

Dosage Details

Parenteral

Susceptible infections

Adult: 4-6 mg/kg once daily or in equally divided doses given every 8 or 12 hr. Life-threatening infections: Increase to up to 7.5 mg/kg daily every 8 hr. All doses may be given as IM, slow IV (over 3-5 min) or as 50-200 ml infusion over 0.5-2 hr. Treatment is usually given for 7-14 days.

Child: Premature infants and neonates <1 wk: 6 mg/kg daily in divided doses every 12 hr. Infants and neonates >1 wk: 7.5-9 mg/kg daily in divided doses every 8 hr. Older children: 6-7.5 mg/kg daily in divided doses every 8 hr. Alternative regimen: Neonates <6 wk: 4-6.5 mg/kg daily in divided doses every 12 hr. Older infants and children: 5.5-8 mg/kg daily in divided doses every 8 or 12 hr.

Parenteral

Urinary tract infections

Adult: 150 mg as a single daily dose for 5 days. Complicated UTI: 3-4 mg/kg daily in divided doses every 12 hr. All doses may be given as IM, slow IV (over 3-5 min) or as a 50-200 ml infusion over 0.5-2 hr. Treatment is usually given for 7-14 days.

Renal Impairment

Dose reduction or lengthening of interval between doses may be necessary. Haemodialysis: 50% of initial loading dose is required after dialysis.

Incompatibility

Do not mix in the same syringe with penicillins or cephalosporins.

Contraindications

Hypersensitivity to the drug or other aminoglycosides.

Special Precautions

Renal impairment; monitor renal, vestibular and auditory function. Monitor peak serum levels. Myasthenia gravis, parkinsonism, infant botulism; conditions predisposing to ototoxicity and nephrotoxicity. Premature and neonatal infants, dehydration, elderly. Pregnancy and lactation.

Adverse Reactions

Headache, malaise, visual disturbances, disorientation, tachycardia, hypotension, palpitations, thrombocytosis, paraesthesia, rash, chills, fever, fluid retention, vomiting, diarrhoea. Increased blood sugar; increased alkaline phosphatase; increased liver enzymes, bilirubin; increased potassium; other abnormal LFTs; decreased haemoglobin, WBCs and platelets; eosinophilia, anaemia and increase in prothrombin time.

Potentially Fatal: Nephrotoxicity; ototoxicity; anaphylaxis.

Overdosage

Haemodialysis will be beneficial. Institute appropriate supportive therapy.

Drug Interactions

Potentially Fatal: Increased incidence of ototoxicity with ethacrynic acid and furosemide. Increased risk of nephrotoxicity/ototoxicity with cisplatin, bacitracin, polymyxin B, colistin, cefaloridine, amphotericin B, kanamycin, aciclovir, gentamicin, amikacin, sisomicin, tobramycin, neomycin, streptomycin, paromomycin, viomycin and vancomycin. Increased risk of prolonged neuromuscular blockade and respiratory arrest with neuromuscular blocking agents, anaesthetics.

Action

Description: Netilmicin, an aminoglycoside antibiotic, binds to 30S and to some extent to 50S ribosomal subunit of susceptible bacteria disrupting photosynthesis, thus rendering the bacterial cell membrane defective.

Pharmacokinetics:

Absorption: Rapidly and completely absorbed (IM). Peak plasma concentrations after 0.5-1 hr (IM), 1 hr (IV infusion).

Excretion: Via urine within 24 hr (80% of a dose); 2-2.5 hr (elimination half-life).

Storage

Store at 2-30°C. Do not freeze.

MIMS Class

Aminoglycosides