Frusin®

Furosemide

Description: Furosemide (**Frusin®**) is a potent loop diuretic that inhibits the renal absorption of chloride and sodium ions, and thereby reduces water reabsorption.

Mode of action: Furosemide (**Frusin®**) acts primarily on the medullary portion of the ascending limb of loop of henle to inhibit Na^+-K^+-$2Cl^-$ co-transport, thus inhibiting sodium and potassium reabsorption resulting in diuresis.

Pharmacokinetics: Furosemide (**Frusin®**) is rapidly absorbed from the gastro-intestinal tract. The diuretic effect of furosemide (**Frusin®**) is apparent within one hour following oral administration and the peak effect occurs in the first or second hour. The duration of action is 4-6 hours but may continue up to 8 hours. A small fraction is metabolized by cleavage of the side chain. depending on the maturity of the kidney, the elimination of furosemide (**Frusin®**) may be slowed down. The metabolism of the drug is also reduced if the infant's glucuronisation capacity is impaired. The terminal half-life is below 12 hours in infants with a post-conceptional age of more than 33 weeks. In infants of 2 months and older, the terminal clearance is the same as in adults. Urinary excretion is accomplished both by glomerular filtration and proximal tubular secretion, together this accounts for roughly only 2/3 of the ingested dose, the remainder being excreted in the feces.

Composition: **Frusin® 40 mg Tablet:** Each tablet contains Furosemide BP 40 mg.
Frusin® Injection: Each 2 ml ampoule contains Furosemide BP 20 mg.
Frusin® 60 ml Solution: Each 5 ml solution contains Furosemide BP 40 mg.

Indications: Acute pulmonary oedema; chronic congestive cardiac failure; hypertension; oedema caused by renal failure and liver cirrhosis; hypercalcaemia; forced diuresis in the treatment of poisoning etc.

Dosage & administration: Edema in heart failure, renal disease, and hepatic disease; pulmonary edema.
Oral
Neonate: 0.5-2 mg/kg every 12-24 hours (every 24 hours if postmenstrual age under 31 weeks)
Child 1 month-12 years: 0.5-2 mg/kg 2-3 times daily (every 24 hours if postmenstrual age under 31 weeks); higher doses may be required in resistant edema; max. 12 mg/kg daily, not to exceed 80 mg daily
Child 12-18 years: 20-40 mg daily, increased in resistant edema to 80-120 mg daily.
Slow intravenous injection
Neonate: 0.5-1 mg/kg every 12-24 hours (every 24 hours if postmenstrual age under 31 weeks).
Child 1 month-12 years: 0.5-1 mg/kg repeated every 8 hours or as per need; max. 2 mg/kg (max. 40 mg) every 8 hours.
Child 12-18 years: 20-40 mg repeated every 8 hours or as per need; dose may be increased in resistant cases.
Continuous intravenous infusion
Child 1 month-18 years: 0.1-2 mg/kg/hour (following cardiac surgery, initially 100 micrograms/kg/hour, doubled every 2 hours until urine output exceeds 1 ml/kg/hour).

Contraindications: Severe sodium and fluid depletion, hypersensitivity to Furosemide, anuria, severe hepatic insufficiency, hepatorenal syndrome, gout etc.

Side effects: Hypokalemia, ototoxicity, sodium and fluid depletion, postural hypotension, reduced glomerular filtration rate, hyperuricaemia, and precipitation of gout, muscular weakness.

Use in pregnancy & lactation: Furosemide crosses the placenta. It should be avoided in pregnancy until and unless extremely required. It should not be used in lactation.

Precautions: The incidence of hypokalemia, sodium and fluid retention should be borne in mind in patients taking Furosemide.

Drug interactions: Furosemide may increase the ototoxic potential of aminoglycoside antibiotics, may potentiate the effects of succinyl choline.

Overdosage: The principal signs and symptoms of overdose with Furosemide are dehydration, blood volume reduction, hypotension, electrolyte imbalance, hypokalemia and hypochloremic alkalosis, and are extensions of its diuretic action. Treatment of overdosage is supportive and consists of replacement of excessive fluid and electrolyte losses. Serum electrolytes, carbon dioxide level and blood pressure should be determined frequently. Adequate drainage must be assured in patients with urinary bladder outlet obstruction.

Storage: Keep out of reach of children. Store in a dry place, below 25˚C temperature and protected from light.

Packaging
Frusin® 40 mg Tablet: Each carton contains 10X10 tablets in blister pack.
Frusin® Injection: Each carton contains 5X2 ampoules in blister pack.
Frusin® 60 ml Solution: Each carton contains a PET bottle having 60 ml solution.

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Ideas for healthcare

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