For Veterinary Use Only.

Furosal®

Solution for Injection

Veterinary Diuretics

COMPOSITION:

Furosal Solution for Injection is a clear, colourless or very light yellow coloured, odourless, viscous solution containing 20 mg Furosemide per each ml.

PHARMACOLOGICAL PROPERTIES:

A saluretic type diuretic, furosemide, contained in the Furosal Solution for Injection is a derivative of ortho-chloro-benzene sulphonamide with organic acid structure. Furosemide affects the ascending limb of loop of Henle. The thick part of the limb, independently, blocks the absorption of chlorine performed by effective carriage and accordingly, the absorption of sodium is reduced, hence resulting in an explicit loss of salt out of the body. The increment of the sodium concentration in the liquid passing through distal tubule enhances the secretion of potassium from tubule cells into the space. Furosemide also increases the excretion of calcium and magnesium at a similar ratio with sodium and stimulates the excretion of hydrogen, ammonium and bicarbonate. Furosemide expands the veins by increasing the synthesis of prostaglandins in kidneys; therefore increases glomerular filtration rate. Furosemide enables to obtain a progressive diuretic response due to the fact that the curve of dose-response is not very upright. Its autotoxic effect, gastrointestinal side effect and the tendency for making alkalosis is low. The effect of furosemide begins within 2-10 minutes following intravenous administration and it reaches plasma peak concentration within 30 minutes. Its plasma half life is about 1 hour whereas its effect period is between 4 and 6 hours. It is quickly excreted from the kidneys by filtration through glomerulus and secretion from the tubules.

AREA OF USE / INDICATIONS:

Furosal Solution for Injection; is used for the cases requiring liquid removal out of the body by creating a diuretic efficiency with the aim of providing the treatment of accumulation of liquid in tissue spaces and all types of oedema. Furosemide is indicated in acute lung oedema, brain oedema, breast oedemas concerning mastitis and agalactia, oedemas associated with kidney failure, oedema associated with injuries and burns, infectious neurotic hepatitis, acute fascioliasis, inflammations of umbilical cord in newborns, pericarditis traumatica, barbiturate and salt intoxications, auto-intoxications, metabolic acidosis arising from mechanical occlusion and cardiac failure, lung bleeding associated with exercise in race horses, hypertension, oedemas associated with snake, scorpion, bee and insect bites; anti-inflammatory pathologic liquid accumulation as ascites and hydrothorax and other conditions requiring diuresis. By using diuretics in the indication areas, it is possible to eliminate the symptoms. In these cases, avoid disregarding the application of the specific treatment for the disease factor.

USAGE AND DOSAGE:

Unless otherwise recommended by the Veterinary Surgeon, Furosal Solution for Injection is administered intravenously (IV) as slow injection. The general dose is 0.5-2 mg/kg c.a in bovine animals; whereas, 2.5-5 mg/kg c.a in cats and dogs. It is generally administered at intervals of 12 hours for 1-2 days (3-4 days in some cases) as per the severity of the case and the response of the animal for the therapy, and by repeating the administration at

intervals of 3-4 hours following the first application, if necessary.
The table of practical dose for Furosal Solution for Injection:

Horse-Cattle	2.5-5 ml/100 kg Live Weight
Cat-Dog	0.25-2 ml/10 kg Live Weight

Avoid using Furosal Solution for Injection in combination with other solutions for injection.

UNDESIRED/SIDE EFFECTS

Due to the concentration of blood as a result of diuretic effect, adaptive changes may be observed such as low blood pressure, high periphery resistance and increased pulse rates in blood circulation. Long-term administrations may lead to dehydration and hyponatremia and hypokalemia associated with ion loss.

DRUG INTERACTIONS:

It should not be used together with aminoglycosides as they strengthen its autotoxic effects and with cephalosporins as they strengthen its nephrotoxic effects. It strengthens the toxic effect of cardiac glycosides. The drugs which inhibit the synthesis of prostaglandin reduce the effect of furosemide. It increases the anticoagulant effects of anticoagulants. It increases the plasma propranol level when administered with propranolol. It reduces the diuretic effect in case of administration with nonsteroid anti-inflammatory drugs and probenecide. It interacts synergistically with thiazide diuretics.

SYMPTOMS OF OVERDOSE, PRECAUTIONS AND ANTIDOTE:

Administrations at high doses and/or for long periods result in dehydration and hyponatremia, hypokalemia, hypomagnesemia and hypochloremia associated with ion loss. At the same time, they may cause permanent deafness depending upon the change in the composition and concentration of electrolytes in internal ear endolymph and the increase in the concentration of blood glucose and uric acid.

WARNINGS ON DRUG RESIDUES IN FOOD:

Withholding Period (WHP): Zero (0) day for flesh and milk. It recommended not to be administered intramuscularly in cattle since it leads to a high amount of residues in the administration area by this route.

CONTRAINDICATIONS:

It should not be used in cases of hepatic coma, kidney failure accompanied by anuria, severe hypokalemia and hyponatremia, hypovolemia, hypotonia and Sulphonamide allergy.
Use during pregnancy: Not recommended to be administered to advanced pregnant animals.

SPECIFIC CLINICAL PARTICULARS / WARNINGS FOR TARGET SPECIES:

During long-term administrations control for serum urea, creatinine and electrolyte should be performed.

GENERAL WARNINGS:

Consult your veterinary surgeon before using and in case an unexpected effect is observed. Keep out of reach of children.

STORAGE CONDITIONS AND SHELF LIFE:

Store at 15-25 ℃ protected from light.

Shelf life is 4 years as of the production date.

COMMERCIAL PRESENTATION FORM:

Presented to the market in 10 and 20 ml amber vials placed in cardboard boxes.

PLACE AND CONDITIONS OF SALE:

Sold with Veterinary Surgeon's prescription in pharmacies and veterinary surgeries (VSP).

APPROVAL DATE OF PACKAGE INSERT: 06.12.2004

MINISTRY OF AGRICULTURE AND RURAL AFFAIRS AUTHORIZATION DATE AND NO : 27.12.1996-8/785

NAME AND ADDRESS OF MARKETING AUTHORIZATION OWNER:

Alke Sağlik Ürünleri San. ve Tic. A.Ş

Dolayoba, Çınardere Mh. 3. Petek Sk.

No: 18, 34896 Pendik-ISTANBUL

NAME AND ADDRESS OF MANUFACTURER COMPANY:

Alke Sağlik Ürünleri San. ve Tic. A.Ş

Merkez Organize Sanayi Bölgesi 2. Kısım 10. Cadde No:7 Tokat

CAK004IA