NEWBORN USE ONLY  
GIVEN ON DOCTORS ORDER ONLY  

MAGNESIUM SULPHATE

DESCRIPTION
An essential body electrolyte. It is a co-factor in numerous enzyme systems and is involved in phosphate transfer, muscle contractility and neuronal transmission. Half of all hypocalcaemic infants also have hypomagnesaemia. Failure to treat hypomagnesaemia may cause a lack of response to administration of calcium.

USE
1. Hypomagnesaemia
2. Refractory hypocalcemia

PRESENTATION
2.47g/5ml ampoules of 49.3% magnesium sulphate. (1ml contains 500mg = 2mmol = 4mEq of magnesium.)

DOSE
ACUTE 25-50mg/kg/dose (0.2–0.4mEq/kg/dose) 6hrly if required. May go up to 100mg/kg/dose in acute cases such as neonatal seizures.

MAINTENANCE 30-60mg/kg/day (add to maintenance IV infusion)

RUTE
IV infusion, IV bolus, IM injection

ADMINISTRATION
IM INJECTION Painful and sometimes cause haematomas. Dilute the dose 1.5 times using water for injection.

IV BOLUS Dilute the dose 1.5 times using water for injection. Give at a rate not exceeding 150mg/minute. Monitor patient for adverse effect.

IV INFUSION Dilute 1ml of injection with 0.9%ssodium chloride or 5%dextrose to make a total of 50ml solution.

STORAGE
Discard unused portion

MONITORING
Continuous cardio-respiratory monitoring. Monitor blood pressure and renal function. Serum Mg and Ca levels should be measured at least once daily.

ADVERSE EFFECT
ANTIDOTE FOR IV MAGNESIUM IS 10% CALCIUM GLUCONATE.

1. Hypotension, respiratory depression, and hypermagnesemia.
2. Mg intoxication can cause circulatory collapse, CNS depression, and respiratory paralysis.
3. Caution when used with digoxin.
4. Necrosis can occur with extravasation.

COMPATIBLE FLUIDS 5%dextrose, 0.9%sodium chloride

COMPATIBLE DRUGS calcium gluconate, cephalothin, hydrocortisone, potassium phosphate, verapamil.
MAGNESIUM SULPHATE cont

COMPATIBLE VIA Y-SITE acyclovir, amikacin, amphotericin, ampicillin, cefazolin, cefotaxime, cephalothin, cyclosporin, erythromycin lactobionate, famotidine, gentamicin, heparin, insulin, metronidazole, morphine, ondansetron, pethidine, piperacillin, potassium chloride, ticarcillin, tobramycin, trimethoprim-sulphamethoxazole, vancomycin.

INCOMPATIBLE DRUGS amphotericin, calcium chloride, ciprofloxacin, dobutamine, folic acid, phytomenadione, sodium bicarbonate.

REFERENCE