Magnesium Sulfate

20% (2g in 10ml) injection **NOW available**[1]

- The only 'ready-to-use' 20% w/v magnesium sulfate preparation licensed in the UK[2]
- Reduces risk of medication errors when diluting higher strength formulations[2]
- Preferred to a preparation that requires manipulation prior to administration as the correct dosage (20% w/v) can be easily administered without the need for dilution[2]
- 3 year shelf life[1]
- Available from Alloga
- EAN code: 5060231320211
- PIP code: USP0069

BE AWARE - IV MAGNESIUM SULFATE IS A HIGH RISK MEDICINE[3]

Overdose can cause respiratory and neurological suppression which can be fatal[3]

Magnesium sulfate should not be administered by the intravenous route at a concentration higher than 20% w/v. Safety reviews have recommended that ready-to-use magnesium sulfate products are used wherever possible[2]

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Prescribing Information

Abbreviated Prescribing Information. Magnesium Sulfate 20% w/v solution for infusion

Presentation: Clear and colourless solution, pH5.5-7.0. **Indications:** Treatment of magnesium deficiency in hypomagnesaemia. Prevention of recurrent seizures in eclampsia. **Dosage and Administration:** Dosage should be tailored according to the individual patient's needs and responses. Plasma magnesium concentrations should be measured to determine the rate and duration of intravenous infusion and should be monitored throughout therapy. *Treatment of magnesium deficiency in hypomagnesaemia*: Up to 40 g or 160 mmols of magnesium ions (200ml of a 20% solution) by slow intravenous infusion (in glucose 5%) over up to 5 days, may be required to replace the deficit (allowing for urinary losses). *Elderly:* No special recommendation. Use with caution due to risk of renal impairment in this age group, *Renal impairment:* Doses must be reduced. Caution must be observed to prevent exceeding the renal excretory capacity. The dosage should not exceed 20g in 48 hours (100ml of a 20% solution or 80mmols of magnesium ions). *Prevention of recurrent seizures in eclampsia:* A loading dose of 4g (16 mmols) of magnesium ions IV (20ml of a 20% solution) or in some cases 5g (20 mmols) of magnesium ions IV (25 ml of a 20% solution), given over 5-15 minutes, is followed by an infusion of 1g (4mmols)/h (5ml of a 20% solution) continued for 24h after the last fit. Recurrent Convulsions: If convulsions recur, a further 2-4g (8-16 mmols) of magnesium ions (10-20 ml of a 20% solution, depending on the woman's weight, 2g (8 mmols) if less than 70Kg) is given IV over 5 min. Appropriate reductions in dosage should be made for patients with renal impairment; a suggested dose reduction in severe renal impairment is a maximum of 20g (80 mmols of magnesium ions) over 48 hours. **Contraindications:** Hypersensitivity to magnesium and its salts. Renal failure. Hepatic encephalopathy, hepatic failure. Parenteral magnesium salts should generally be avoided in patients with heart block. **Precautions:** Magnesium salts should be administered with caution to patients with impaired renal function and appropriate dosage reduction should be made. Magnesium sulfate should not be used in hepatic coma if there is a risk of renal failure. Respiratory depression may occur and caution is required in patients with respiratory disease. Parenteral magnesium should be used with caution in individuals with myasthenia gravis, to prevent an exacerbation of the condition or the precipitation of a myasthenic crisis. A risk-benefit assessment should be performed in individual cases prior to initiation of treatment. Serum calcium levels should be routinely monitored in patients receiving magnesium sulfate. **Interactions:** Muscle Relaxants: non-depolarising muscle relaxants such as tubocurarine are enhanced by parenteral magnesium salts. Nifedipine: profound hypotension was produced in two women who were given oral Nifedipine. Magnesium salts should also be administered with caution to those receiving digitalis glycosides. Parenteral administration of magnesium salts may enhance the effects of neuromuscular blocking agents or of central nervous system depressants. The neuromuscular blocking effects of parenteral magnesium and aminoglycoside antibacterials may be additive. CNS Depressants: When barbiturates, opiates, general anaesthetics, or other CNS depressants are administered concomitantly with magnesium sulfate, dosage of these agents must be carefully adjusted because of the additive central depressant effects. Intravenous calcium will antagonise the effects of magnesium. The muscle stimulating effects of barium toxicity are reduced by magnesium. **Fertility, pregnancy and lactation:** Pregnancy As eclampsia may be life-threatening to mother and baby, magnesium sulfate may be administered in this condition. Magnesium crosses the placenta and may produce hypotonia, hypoflexia, hypotension. If administered during labour it may cause respiratory depression of the newborn infant. When used in pregnant women, fetal heart rate should be monitored and use within 2 hours of delivery should be avoided. Breastfeeding Safety during breastfeeding has not been established. Therefore, as with all drugs, it is not advisable to administer magnesium sulfate during breastfeeding unless considered essential. Fertility There is no information on the effects of magnesium sulfate on fertility. **Undesirable effects**: *Immune system disorders* Hypersensitivity reactions. Excessive administration of magnesium leads to the development of symptoms of hypermagnesaemia which may include: *Metabolism and Nutritional disorders* Electrolyte/fluid abnormalities (hypophosphataemia, hyperosmolar dehydration) *Nervous system disorders* Respiratory depression, nausea, vomiting, drowsiness and confusion, coma, slurred speech, double vision *Cardiac disorders* Cardiac arrhythmias, cardiac arrest, ECG changes (prolonged PR, QRS and QT intervals), bradycardia *Vascular disorders* Flushing of the skin and hypotension due to peripheral vasodilatation *Musculoskeletal and connective tissue disorders* Loss of tendon reflexes due to neuromuscular blockade, muscle weakness *Other undesirable effects* Thirst. There have been isolated reports of maternal and foetal hypocalcaemia with high doses of magnesium sulfate. Especially in patients with impaired renal function, there may be sufficient accumulation of magnesium sulfate to produce toxic effects. **Marketing Authorisation Numbers:** PL39280/0007. ***See approved Summary of Product Characteristics for further information.*** **For Further information contact:** Synchrony Pharma Ltd, Business & Technology Centre, Bessemer Drive, Stevenage, SG1 2DX. Date of Preparation: February 2019 Item Code: MAGS/001/02/2019

Adverse events should be reported. For reporting within the UK, forms and information can be found at www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store. Adverse events should also be reported to Pharmacovigilance at Synchrony Pharma on Phone: +44(0) 1438791091 Email: pv@synchronypharma.com

References

1. Magensium Sulfate SmPC, March 2018 **2.** In use safety of intravenous magnesium sulfate, October 2018. Specialist Pharmacy Service (www.sps.nhs.uk, last accessed January 2019) **3.** Reducing the risk of errors with Iv magnesium sulfate. Wessex Academic Health Service Network 2013

Item code: MAGS/002/02/2019
Date of preparation: February 2019

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