SmPC

Country :	Lebanon
Date of approval :	22.06.2009
Procedure :	National

SUMMARY OF PRODUCTS CHARACTERISTICS

1. Name of the medicinal product

MAGNESIUM SULPHATE PROAMP® 0.15 g/ml, solution for injection

2. Qualitative and quantitative composition

Magnesium sulphate heptahydrate ……0.15 g
For 1 ml of injectable solution

One ampoule of 10 ml contains 1.5 g of magnesium sulphate heptahydrate.
Osmolarity = 580-650 mOsm/kg

Ionic formula :
Magnesium: 0.609 mmol/ml
Sulphate : 0.609 mmol/ml
pH : 5,5 to 7
Cross refer to section 6.1 for excipients.

3. Pharmaceutical form

Solution for injection.
Clear and colourless solution.

4. Clinical particulars

4.1. Therapeutic indications

The administration of this solution is indicated in the following cases :
- curative treatment of torsades de pointes,
- treatment of acute hypokalemia associated with hypomagnesemia,
- magnesium supplementation during water and electrolyte re-equilibration,
- magnesium supplementation during parenteral nutrition,
- preventive and curative treatment of eclampsia crises.

4.2. Posology and method of administration
Parenteral route.

Posology

Curative treatment of torsades de pointes:
Intravenous bolus of 8 mmol magnesium element, or 2 g magnesium sulphate heptahydrate in a slow intravenous injection, followed by a continuous infusion of 0.012 to 0.08 mmol magnesium element per minute, or 3 to 20 mg/minute of magnesium sulphate heptahydrate.

Treatment of acute hypokalemia associated with hypomagnesemia:
Intravenous infusion of 24 to 32 mmol magnesium element, or 6 to 8 g magnesium sulphate heptahydrate, per 24 hour period.
Potassium supplements should be administered in a container different from that used for the magnesium.
Treatment should be discontinued as soon as serum magnesium levels return to normal.

Magnesium supplements during re-equilibration of water and electrolytes and during parenteral nutrition:
Intravenous infusion of 6 to 8 mmol magnesium element for 24 hour period, or 1.5 to 2 g magnesium sulphate heptahydrate.

For children, the usual dosage is 0.1 to 0.3 mmol/kg magnesium element, corresponding to 25 to 75 mg/kg magnesium sulphate heptahydrate per 24 hour period.

Preventive and curative treatment of eclampsia crises.
Slow intravenous route.

To prevent an eclampsia crisis or when it occurs, administer an intravenous infusion of 16 mmol magnesium element, or 4 g magnesium sulphate heptahydrate, in 20 to 30 minutes.

If the crisis persists, repeat the administration of an intravenous infusion of 16 mmol magnesium element, or 4 g magnesium sulphate heptahydrate, without exceeding a maximum cumulated dose of 32 mmol magnesium element, or 8 g magnesium sulphate heptahydrate, during the first hour of treatment.

Thereafter, a continuous infusion of 8 to 12 mmol magnesium element, or 2 to 3 g magnesium sulphate heptahydrate per hour should be given for 24 hours following the last crisis.

Method of administration
The magnesium heptahydrate's solution must be administered:
- in a slow intravenous injection in a supine patient, a direct intravenous injection (bolus) being reserved for the treatment of torsades de pointes, which must only be given in a specialised unit.
- diluted in a dextrose or saline solution.

4.3. Contra-indications
- Severe renal insufficiency (clearance of the creatinin lower than 30 ml/min/1.73m²)

4.4. Special warnings and precautions for use
HYPERTONIC SOLUTION, TO BE INJECTED SLOWLY

- Initial intravenous administrations should be performed in a hospital setting.
- Comply with an infusion rate, which does not exceed 0.6 mmol magnesium element per minute, or 150 mg/minute magnesium sulphate heptahydrate.
- Monitoring of blood pressure during intravenous injection and continuous infusion.
- Monitoring of serum magnesium levels: treatment should be discontinued as soon as they return to normal.
- Reduce the dosage in patients with renal failure and ensure increased monitoring of the renal function, blood pressure and serum magnesium levels.

4.5 Interaction with other medicinal products and other forms of interaction
Not applicable.

4.6. Pregnancy and lactation
Pregnancy
In clinical studies, no malformations or foetotoxicity has been observed to date. Nevertheless, the monitoring of pregnancies exposed to the administration of magnesium salts per intravenous route is insufficient to exclude any risk.
Consequently, the use of this product should be envisaged during pregnancy only if necessary.
Lactation
In the absence of data on a potential entry in mother's milk, it is preferable to avoid lactation during the treatment.

4.7. Effects on ability to drive and use machines
Not applicable.

4.8. Undesirable effects
- pain at the injection site, vasodilatation with a sensation of heat,
- hypermagnesemia, which may be lethal in the event of severe renal failure or too rapid injection.

4.9 Overdose
The first signs of hypermagnesemia are an inhibition of patellar reflexes, an impression of heat, drowsiness, difficulties in speaking, a muscular paralysis with difficulty in breathing and, at worst, respiratory and cardiac arrest.

Treatment
- rehydration, forced diuresis,
- IV injection of 1 g calcium gluconate,
- haemodialysis or peritoneal dialysis in the event of renal failure.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties
Pharmacotherapeutic class: Electrolytes solution/Magnesium sulphate
ATC Code : B05XA05
(B : blood and blood forming organs)

From a physiological standpoint
Magnesium, a primarily intracellular cation, reduces neuronal excitability and neuromuscular transmission.
It is involved in many enzymatic reactions.
It is a structural element: 50% of the body's magnesium is found in the bones.

From a clinical standpoint: a serum magnesium concentration:
- between 12 and 17 mg/l (1 to 1.4 mEq/l or 0.5 to 0.7 mmol/l) indicates moderate magnesium deficiency;
- under 12 mg/l (1 mEq/l or 0.5 mmol/l), indicates severe magnesium deficiency.

Magnesium deficiency can be either:
- primary, due to a congenital metabolic abnormality

(chronic congenital hypomagnesaemia),
- or secondary, due to:
  - insufficient intake (severe undernutrition, alcoholism, total parenteral nutrition),
  - digestive malabsorption (chronic diarrhea, GI fistula, hypoparathyroidism),
  - increased renal loss (tubular disease, severe polyuria, overuse of diuretics, chronic pyelonephritis, primary hyperaldosteronism, cisplatin treatment).

Non-specific clinical symptoms that may occur with magnesium deficiency include shivering, muscular weakness, tetanus infection, ataxia, hyperreflexia, psychological disorders (irritability, nervousness, insomnia, etc.), heart rhythm disorders (extrasystole, tachycardia), and digestive disorders (diarrhea, etc.).

5.2. Pharmacokinetic properties
Mainly urinary excretion.

5.3. Preclinical safety data
Not applicable.

6. PHARMACEUTICAL PARTICULARS
6.1. List of excipients
Water for injections.

6.2. Incompatibilities
In the absence of compatibility studies, this medicinal product should not be mixed with other medicines.

6.3. Shelf life
2 years.
6.4. Special precautions for storage
Store below +25 °C.
6.5. Nature and contents of container
10 ml in polypropylene ampoule, box of 10, 20, 50 or 100
6.6. Special precautions for disposal, and other handling
No particular requirements.