PRODUCT INFORMATION
PROTAMINE SULFATE INJECTION B.P.

DESCRIPTION

A sterile, pyrogen-free, clear, colourless 1% solution of Protamine Sulfate (Salmine) in Sodium Chloride Intravenous Infusion B.P. (0.9% w/v) adjusted to a pH of 2.5 to 3.5 and supplied in 5mL glass ampoules. Protamine sulfate injection also contains sodium chloride, hydrochloric acid, sodium hydroxide and water for injections as excipients.

INDICATIONS

Protamine is a basic protein which combines with heparin to form a stable, inactive complex. It is used to counteract the anticoagulant effect of heparin; before surgery; after renal dialysis; after open-heart surgery; if excessive bleeding occurs and when an overdose has inadvertently been given.

CONTRAINDICATIONS

None known

PRECAUTIONS

Too rapid administration of protamine sulfate may cause severe hypotension and anaphylactoid reactions. Rapid administration may also influence the severity of symptoms in a sensitized individual. For this reason, protamine sulfate should be administered by slow intravenous injection over a period of about 10 minutes. Facilities for resuscitation and treatment of shock should be available.

Not more than 50mg Protamine Sulfate (5mL) - 1 ampoule should be given at any one time. Protamine is not suitable for reversing the effect of oral anticoagulants.

Fatal cases of anaphylactic reactions have been reported. Caution should be observed when administering protamine sulfate to patients who may be at increased risk of allergic reaction to protamine. These patients include those who have previously undergone procedures such as coronary angioplasty or cardio-pulmonary by-pass which may include use of protamine, diabetics who have been treated with protamine insulin, patients allergic to fish, and men who have had a vasectomy or are infertile and may have antibodies to protamine.

Patients undergoing prolonged procedures involving repeated doses of protamine should be subject to careful monitoring of clotting parameters. A rebound bleeding effect may occur up to 18 hours post-operatively which responds to further doses of protamine.

Use in pregnancy - Category B2

Category B2 of Australian Categorisation of Risk of Drug Use in Pregnancy.

Use in lactation

As with most drugs, to be used only if clearly indicated with caution during lactation.

Paediatric use

Safety and efficacy in children have not been established, therefore use in children is not recommended.

INTERACTIONS WITH OTHER MEDICINES

None known

ADVERSE EFFECTS

When used at doses in excess of that required to neutralise the anticoagulant effect of heparin, protamine sulfate exerts its own anticoagulant effect.

Following injection of protamine sulfate the following effects have been observed:

- a sudden fall in blood pressure,
- bradycardia,
- pulmonary and systemic hypertension,
- dyspnoea,
- transitory flushing and a feeling of warmth,
- back pain,
- nausea and vomiting,
- lassitude

Hypersensitivity reactions (including shock) and fatal anaphylaxis have been reported (see Precautions).
Non cardiogenic pulmonary oedema, sometimes fatal has been reported.
Post procedural haemorrhage has been reported.
Cases of thrombocytopenia have been reported and in some cases reported with antibody formation.

DOSAGE AND ADMINISTRATION

Protamine Sulfate Injection should be administered by slow intravenous injection over a period of about 10 minutes. The dose is dependent on the amount of heparin to be neutralised. 1mg of Protamine Sulfate will usually neutralise at least 100 international units of mucous heparin or 80 units of lung heparin. Since heparin is being continuously excreted, the dose of Protamine Sulfate should be reduced if more than 15 minutes have elapsed since the heparin injection. Ideally, the dose required to neutralise the action of heparin should be calculated from the results of determinations of the amount required to produce an acceptable blood clotting time in the patient. In gross excess, protamine itself acts as an anticoagulant.

OVERDOSAGE

Symptoms: Overdosage may cause hypotension, bradycardia and dyspnoea with a sensation of warmth, nausea, vomiting, lassitude and transitory flushing.

Treatment: Includes monitoring of coagulation tests, respiratory ventilation and symptomatic treatment. If bleeding is a problem, fresh frozen plasma or fresh whole blood should be given.

PRESENTATION AND STORAGE CONDITIONS

10 X 5mL ampoules: 10mg/mL

NAME AND ADDRESS OF THE SPONSOR

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POISON SCHEDULE OF THE MEDICINE

Prescription Medicine (Schedule 4)

DATE OF FIRST INCLUSION IN THE ARTG

14 May 1991

DATE OF MOST RECENT AMENDMENT
23 June 2016