Product Information

NAME OF THE MEDICINE

BOX JELLYFISH ANTIVENOM AUST R 74891

DESCRIPTION

BOX JELLYFISH ANTIVENOM is prepared from the plasma of sheep immunised with the venom of the box jellyfish (*Chironex fleckeri*). Each vial contains 20,000 units of antivenom. The product also contains phenol, sodium chloride and other ovine plasma proteins in an aqueous solution.

PHARMACOLOGY

Box jellyfish are present in Australian tropical waters from December to March, but stinging has been reported at other times of the year. In the Northern Territory, the box jellyfish stinging season extends from 1 October to 31 May.

They favour calm water close to shore with an unobstructed sandy sea floor. Fully grown specimens are 30 cm in diameter, have a curtain of very long tentacles which they trail along the sea floor and are virtually invisible. Each tentacle contains many thousands of nematocysts.

Each nematocyst discharges venom in response to mechanical or chemical stimulation and can penetrate human skin. Swimmers who come into contact with the box jellyfish may have several metres of adherent tentacles which cause serious and intense pain. They leave typical linear red weals on the skin which can, in some cases, progress to full thickness skin necrosis. The pain can be severe enough to cause screaming, panic and irrational behaviour. The muscular exertion involved tends to disseminate the venom.

The box jellyfish venom contains toxins, which affect the myocardium and the neuromuscular mechanisms of the respiratory system as well as causing dermatonecrosis. Death can occur in less than 20 minutes.

Not all box jellyfish stings cause severe symptoms. The severity depends mainly on the surface area of tentacular contact and the age of the recipient. Contact of several metres in a small child can be fatal.

In most cases of severe envenoming, intravenous use of the antivenom, given soon after the sting, has produced a diminution of pain and inflammation in the skin wheals within a few minutes. Larger doses given intramuscularly have evoked a slower response.

INDICATIONS

For the treatment of patients who exhibit manifestations of systemic envenoming or who have extensive local involvement causing extreme pain which does not respond to routine analgesic therapy.

CONTRAINDICATIONS

There are no absolute contraindications, but the product should not be used unless there is clear evidence of systemic envenoming or extensive local involvement with intractable pain.

See PRECAUTIONS for use of BOX JELLYFISH ANTIVENOM in patients with a known allergy.

PRECAUTIONS

When medicinal products prepared from animal plasma are administered, infectious diseases due to the transmission of infective agents cannot be totally excluded. This applies to pathogens of hitherto unknown origin. This possibility must always be considered and should be conveyed, whenever possible, to patients who may receive the product. Historically there have been no known recorded cases of transmission of viruses by this product.

Most stings from box jellyfish are not life threatening although the initial pain following tentacle contact may be severe. Severe envenoming following extensive tentacle contact over one or more limbs can cause death within 20 minutes.

In serious cases of envenoming, cessation of respiration and cardiac arrest can occur very soon after the sting. In these cases it is essential to immediately initiate cardiopulmonary resuscitation and other appropriate first aid measures recommended by local guidelines, before commencing antivenom therapy.

Severe cases of systemic envenoming should be managed in an intensive care unit.

As this product is prepared from animal plasma, severe allergic reactions may follow, including anaphylactic shock. Adrenaline must be available during antivenom therapy and prepared ready for use prior to antivenom administration. Anaphylactic reactions may be more likely to occur in those who are atopic or have previously received ovine plasma. In the past, some authorities have advocated premedication with subcutaneous adrenaline and intravenous antihistamine, particularly in those patients who are known to be at risk, but such use is controversial.

The results of skin testing to determine patients who may have an allergic reaction are not satisfactory and should not be undertaken.

Antivenoms may bind complement and produce an anaphylactoid reaction in patients who have had no previous contact with ovine protein.

The risk of such a reaction can be reduced by adequate dilution of the antivenom prior to infusion, although care should be taken to avoid fluid overload (see also DOSAGE AND ADMINISTRATION).

Should anaphylaxis occur, suspend administration of antivenom, and implement treatment measures immediately, according to an appropriate protocol or guideline. Further administration of antivenom should be considered in the light of the relative problems of envenoming and anaphylaxis.

Delayed serum sickness can occur following the use of animal derived antivenoms. The most common manifestations include fever, cutaneous eruptions, arthralgia, lymphadenopathy and albuminuria. Less commonly, arthritis, nephritis, neuropathy and vasculitis can occur. The condition can appear days or weeks after the use of antivenom but can occur as soon as 12 hours after a second injection of a similar animal protein. Patients should be advised of the symptoms of serum sickness and warned to seek urgent medical attention if such symptoms develop.

The incidence of serum sickness is greater with larger volumes of antivenom.

Use in pregnancy

There is limited but inconclusive information on the safety of this product in pregnant

women. It is advisable to carefully weigh the risks of untreated envenoming against the expected benefits and potential risks of antivenom administration.

Use in lactation

No information is available on the use of the product during lactation. It is advisable to carefully weigh the risks of untreated envenoming against the expected benefits and potential risks of antivenom administration.

ADVERSE EFFECTS

The following adverse reactions, presented below according to System Organ Class and frequency, have been identified during post-approval use of CSL antivenoms. Adverse event frequencies are defined as follows:

Very common: ≥1/10; common: ≥1/100 and < 1/10; uncommon: ≥1/1000 and <1/100; rare: ≥1/10,000 and <1/1000; and very rare: <1/10,000.

Immune system disorders
Common: Allergic reactions including anaphylactic shock and delayed serum sickness

Skin and subcutaneous tissue disorders
Common: Urticaria, rash

DOSAGE AND ADMINISTRATION

Not everyone who is stung by a box jellyfish needs antivenom. In cases of severe systemic envenoming, cardiopulmonary resuscitation and other appropriate first aid measures recommended by local guidelines must be instituted when necessary before giving antivenom. **Antivenom should be administered as soon as possible after resuscitation has commenced. Ideally this will be in an intensive care facility.**

The contents of one vial (20,000 units) should be administered slowly by intravenous infusion after dilution with an intravenous solution such as Hartmann's solution or 0.9% w/v Sodium Chloride. The dose is the same for both adults and children.

The antivenom should be diluted 1 in 10, although a dilution of 1 in 5 may be more appropriate for patients at risk of fluid overload. Seek expert advice regarding dilution of antivenom to avoid fluid overload, as required.

In the past, some authorities have advocated premedication with 0.25 mL of 1:1,000 adrenaline subcutaneously and intravenous antihistamine to reduce the chance of anaphylactic shock, particularly in those patients who are known to be at risk, but such use is controversial (see PRECAUTIONS).

If intravenous administration is not practical, 3 vials should be given undiluted by the intramuscular route at 3 separate sites.

The aim of antivenom therapy is to neutralise the venom. Sufficient antivenom must be given to combat the effects of the venom. Lack of response to the antivenom may indicate that treatment is inadequate and more antivenom may be required.

The patient must be monitored for at least 6 hours after conclusion of the antivenom infusion.

Before starting the infusion of antivenom, adrenaline should be prepared ready to use, as anaphylactic reactions can occur rapidly (see PRECAUTIONS).

Should an anaphylactic reaction occur, suspend administration of antivenom and implement treatment measures immediately according to an appropriate protocol or guideline.

As delayed serum sickness is relatively common following the use of large volumes of foreign protein, patients who have received antivenom should be advised of the symptoms of serum sickness and warned to seek urgent medical attention if such symptoms develop.

It may occasionally be necessary to treat both envenoming and anaphylaxis simultaneously.

BOX JELLYFISH ANTIVENOM contains no antimicrobial preservative. Use once only and discard any residue.

OVERDOSAGE

No information is available on overdosage. Contact the Poisons Information Centre on 131 126 for further advice on overdosage management.

PRESENTATION AND STORAGE CONDITIONS

Presentation: BOX JELLYFISH ANTIVENOM is available as vials containing 20,000 units in aqueous solution. The product volume is potency dependant thus it varies from batch to batch. Please refer to the product volume printed on the carton.

Storage Conditions: BOX JELLYFISH ANTIVENOM should be protected from light and stored between 2 to 8°C. Do not freeze.

NAME AND ADDRESS OF THE SPONSOR

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POISON SCHEDULE OF THE MEDICINE

Prescription Only Medicine (S4)

Date of first inclusion in the Australian Register of Therapeutic Goods:21 July 2000

Date of Most Recent Amendment: 2 June 2017