

# AUSTRALIAN PRODUCT INFORMATION – TAIPAN ANTIVENOM injection

## 1 NAME OF THE MEDICINE

TAIPAN ANTIVENOM (equine)

## 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

TAIPAN ANTIVENOM is prepared from the plasma of horses immunised with the venom of the coastal taipan snake (*Oxyuranus scutellatus*). Each vial contains 12,000 units of antivenom which has been standardised to neutralise *in vitro*, the average yield of venom from the taipan. Each 1 mL of the product also contains 2.2 mg phenol, 8 mg sodium chloride and water for injections to 1 mL in an aqueous solution. Each vial contains  $\leq 170$  mg per mL of plasma protein of equine origin.

The product volume is potency dependant thus it varies from batch to batch. Please refer to the product volume printed on the carton.

## 3 PHARMACEUTICAL FORM

TAIPAN ANTIVENOM is a concentrated injection for intravenous use available as vials containing 12,000 units of antivenom in aqueous solution. It is a light straw coloured, slightly viscous, transparent solution in a glass vial.

## 4 CLINICAL PARTICULARS

### 4.1 THERAPEUTIC INDICATIONS

For the treatment of patients who exhibit manifestations of systemic envenoming following a bite by a taipan.

### 4.2 DOSE AND METHOD OF ADMINISTRATION

When there is evidence of systemic envenoming and it has been established that TAIPAN ANTIVENOM is the appropriate treatment, the contents of one vial (12,000 units) should be administered slowly by intravenous infusion after dilution with Hartmann's Solution or 0.9% w/v sodium chloride. Once diluted, TAIPAN ANTIVENOM should be used immediately. Do not store diluted antivenom.

The dose is the same for adults and children.

If severe defibrination is present at the onset of treatment, at least 3 vials of antivenom should be given as initial treatment.

The antivenom should be diluted 1 in 10, although a dilution of 1 in 5 may be more appropriate to avoid fluid overload in patients that are at risk (e.g. small children). Seek expert advice regarding dilution of antivenom to avoid fluid overload, as required. It should not be administered by the intramuscular route.

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 section 4.4 – SPECIAL WARNINGS AND PRECAUTIONS FOR USE).

**The patient should receive the antivenom in an intensive care unit if possible and always in a setting where resuscitation facilities are immediately available.**

**If the patient has received adequate first aid treatment, the splint and pressure bandage should not be removed until antivenom is available for infusion, as removal can precipitate significant effects of systemic envenoming.**

The aim of antivenom therapy is to neutralise the venom. Sufficient antivenom must be given to neutralise further venom migrating from the bite site. Deterioration in the patient's condition may indicate that treatment is inadequate and more may be required. Children may become critically ill and may need more antivenom. Patients with severe systemic envenoming may require up to 8 vials to control the effects. It should be remembered that such high doses of this product contain large amounts of horse protein.

The patient must be monitored for at least 6 hours after antivenom is administered.

**Before starting the infusion of antivenom, adrenaline should be prepared ready to use, as anaphylactic reactions can occur rapidly (see section 4.4 – SPECIAL WARNINGS AND PRECAUTIONS FOR USE).**

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 horse serum, 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.

TAIPAN ANTIVENOM contains no antimicrobial preservative. Use in one patient on one occasion only and discard any residue.

### 4.3 CONTRAINDICATIONS

There are no absolute contraindications, but the product should not be used unless there is clear evidence of systemic envenoming with the potential for serious toxic effects.

### 4.4 SPECIAL WARNINGS AND PRECAUTIONS FOR USE

**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.**

In many cases of snake bite, little venom is injected and significant envenoming does not occur. With Taipan, however, the majority of patients will develop systemic envenoming. If a significant amount of venom has been introduced, clinical or laboratory evidence of envenoming is usually present within 2 hours but can be delayed, particularly if efficient first aid has been

instituted with immobilisation and a firm pressure bandage.

**Removal of the bandage and splint will often precipitate the systemic effects of the venom in patients who have been bitten.**

Suspected cases of snake bite should be observed for at least 12 hours after being bitten or after removal of the bandage, prior to discharge, and preferably in an intensive care setting. Such patients must be regularly monitored for signs of neuromuscular impairment, coagulopathy, myolysis, renal impairment and other abnormalities.

A diagnosis of systemic envenoming should be based on clinical and, where possible, laboratory evidence.

The venom detection kits can be helpful in detecting and identifying specific venom at the bite site or in urine and can enable the selection of the appropriate monovalent antivenom. Tests of blood are less reliable.

**As this product is prepared from animal serum, severe allergic reactions may follow, including anaphylactic shock. Adrenaline must be available during antivenom therapy and prepared ready for use prior to antivenom administration.** Anaphylactoid reactions may be more likely to occur in those who are atopic or who have previously received equine serum. This would include patients who have previously received equine Tetanus Antitoxin (prior to 1974 in Australia). 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 equine protein. The risk of such a reaction can be reduced by adequate dilution of Antivenom prior to infusion, although care should be taken to avoid fluid overload (also see section 4.2 DOSE AND METHOD OF 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.

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

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, but can be expected to occur in at least 5% of patients receiving horse serum for the first time.

### **Use in the elderly**

No data available.

### **Paediatric use**

See section **4.2 DOSE AND METHOD OF ADMINISTRATION**.

### **Effects on laboratory tests**

No data available.

## **4.5 INTERACTIONS WITH OTHER MEDICINES AND OTHER FORMS OF INTERACTIONS**

No data available.

## **4.6 FERTILITY, PREGNANCY AND LACTATION**

### **Effects on fertility**

No data available.

### **Use in pregnancy**

There is limited but inconclusive information on the safety of the 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.

## **4.7 EFFECTS ON ABILITY TO DRIVE AND USE MACHINES**

The effects of this medicine on a person's ability to drive and use machines were not assessed as part of its registration.

## **4.8 ADVERSE EFFECTS (UNDESIRABLE EFFECTS)**

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

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

### **Immune system disorders**

*Common:* Allergic reactions including anaphylactic shock and delayed serum sickness

**Nervous system disorders**

*Common:* Headache

**Gastrointestinal disorders**

*Uncommon:* Abdominal pain, vomiting, nausea and diarrhoea.

**Skin and subcutaneous tissue disorders**

*Common:* Urticaria, rash

**Musculoskeletal and connective tissue disorders**

*Uncommon:* Myalgia

**General disorders and administration site reactions**

*Common:* Pyrexia, chills

*Uncommon:* Local injection site reactions, chest pain

**Reporting suspected adverse effects**

Reporting suspected adverse reactions after registration of the medicinal product is important. It allows continued monitoring of the benefit-risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions at <http://www.tga.gov.au/reporting-problems>.

**4.9 OVERDOSAGE**

For information on the management of overdose, contact the Poisons Information Centre on 131 126 (Australia).

**5 PHARMACOLOGICAL PROPERTIES****5.1 PHARMACODYNAMIC PROPERTIES****Mechanism of action**

Taipan venom is probably the most potent snake venom in the world. Before the use of antivenom, taipan bites were almost invariably fatal. The venom contains a neurotoxin which can cause respiratory paralysis, a procoagulant which converts prothrombin to thrombin, which in turn produces a secondary afibrinogenaemia with resultant haemorrhage, and a myolytic toxin.

Although the amount of antivenom in each dose of TAIPAN ANTIVENOM will neutralise the average yield of venom *in vitro*, the actual amount needed in clinical practice may be considerably more, particularly if treatment is delayed and the effects of the venom are already evident.

**Clinical trials**

No data available.

**5.2 PHARMACOKINETIC PROPERTIES**

No specific information is available on absorption, distribution, metabolism or excretion of the TAIPAN ANTIVENOM.

### **5.3 PRECLINICAL SAFETY DATA**

#### **Genotoxicity**

No data available.

#### **Carcinogenicity**

No data available.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 LIST OF EXCIPIENTS**

Refer to section 2 – QUALITATIVE AND QUANTITATIVE COMPOSITION.

### **6.2 INCOMPATIBILITIES**

Incompatibilities were either not assessed or not identified as part of the registration of this medicine.

### **6.3 SHELF LIFE**

In Australia, information on the shelf life can be found on the public summary of the Australian Register of Therapeutic Goods (ARTG). The expiry date can be found on the packaging.

### **6.4 SPECIAL PRECAUTIONS FOR STORAGE**

TAIPAN ANTIVENOM should be protected from light and stored at 2-8°C. Do not freeze.

### **6.5 NATURE AND CONTENTS OF CONTAINER**

TAIPAN ANTIVENOM is available as 1 x 12,000 units in a clear glass vial.

The vial and all associated components do not contain natural rubber latex.

### **6.6 SPECIAL PRECAUTIONS FOR DISPOSAL**

In Australia, any unused medicine or waste material should be disposed of in accordance with local requirements.

### **6.7 PHYSICOCHEMICAL PROPERTIES**

Not applicable.

## **7 MEDICINE SCHEDULE (POISONS STANDARD)**

Prescription Only Medicine (S4)

## 8 SPONSOR

Seqirus Pty Ltd  
ABN: 26 160 735 035  
63 Poplar Road  
Parkville Victoria 3052  
Australia

## 9 DATE OF FIRST APPROVAL

21 July 2000

## 10 DATE OF REVISION

3 February 2020

### SUMMARY TABLE OF CHANGES

Section Changed	Summary of new information
All	Updated for compliance with TGA Form for providing PI (March 2018).
2	Updated with quantitative composition information and with the amount of protein in each vial and its species of origin.
3	Inclusion of visual appearance of the medicine.
4.2	Updated statement to clarify that the product is for single use only.
6.5	Updated with the number of units in the pack and with statement on latex in the product packaging
8	Inclusion of company ABN number.