

ANTI-ARACHNIDIC SERUM

PHARMACEUTICAL FORM AND PRESENTATION

ANTI-ARACHNIDIC SERUM is supplied in ampoules with 5 mL injectable solution of F(ab)₂ fragments of specific and purified immunoglobulins obtained from horse plasma immunized with a mixture of scorpion venom of the genus *Tityus* and spider venom of the genus *Phoneutria* ("aranha-armadeira") and *Loxosceles* ("aranha-marrom").

PEDIATRIC AND ADULT USE

COMPOSITION

Each 5 mL ampoule contains:

- F(ab)₂ immunoglobulin fragments capable of neutralizing at least 7.5 MLD (Minimum Lethal Dose) of reference venom *Tityus serrulatus* (serum neutralization in guinea-pigs), 7.5 MLD of reference venom *Phoneutria nigriventer* (serum neutralization in guinea-pigs) and 75 MND (Minimum Necrosis Dose) of reference venom *Loxosceles sp* (serum neutralization in rabbits).
- Phenol..... 17.5 mg (Max.)
- 0.85% Physiological Solution q.s.5 mL

INFORMATION FOR PATIENTS

ANTI-ARACHNIDIC SERUM SHOULD BE KEPT OUT OF THE REACH OF CHILDREN.

Keep ANTI-ARACHNIDIC SERUM at 2°C - 8°C (35.6°F - 46.4°F). Do not freeze. Ampoule contents should be clear and transparent. Do not use in case of turbidity or presence of precipitates. EXPIRY DATE AND LOT NUMBER are indicated on the packaging and ampoule. Use serum immediately after opening ampoule. Do not use after the expiry date.

Serum takes effect immediately after administration, neutralizing *Tityus* scorpion venom toxin and *Phoneutria* and *Loxosceles* spider venom toxin in the blood. Venom neutralization in tissue may occur later. ANTI-ARACHNIDIC SERUM is not contraindicated during pregnancy, but the patient's physician should be informed. Administer ANTI-ARACHNIDIC SERUM under medical supervision, preferably intravenously according to recommended dosage (See DOSAGE).

Administration of Hyperimmune sera may trigger different degrees of allergic reactions. The most common are: pruritus/redness; urticaria; dry cough/hoarseness; nausea/vomits; asthma attack. Severe reactions are rare and fatal anaphylactic shock was reported in 1:50,000 patients administered horse serum.

After prescription, administer ANTI-ARACHNIDIC SERUM as soon as possible. There is no contraindication to serum administration after the ingestion of food and/or drinks, but there is a risk of complications related to vomiting (aspiration), keep patient under closer supervision.

There are practically no contraindications. The serum should preferably be used in hospitals therefore it may trigger allergic reactions, some potentially severe.

RECOMMENDATIONS

- DO NOT USE TOURNIQUETS OR GARROTES
- DO NOT MAKE INCISIONS AT THE BITE SITE
- DO NOT USE AMMONIA, CAUSTICS, IRRITATING OR CONTAMINATED SUBSTANCES ON THE BITE SITE
- DO NOT INGEST TOXIC LIQUIDS OR ALCOHOLIC BEVERAGES
- KEEP THE PATIENT AT REST, AVOID WALKS
- KEEP THE PATIENT WELL HYDRATED

TECHNICAL INFORMATION

INDICATION

ANTI-ARACHNIDIC SERUM is the most effective medicine for treating *Tityus* scorpion and *Phoneutria* and *Loxosceles* spider poisoning. It is not indicated for treating serpent poisoning. The sooner the serum is administered, better will be the serum therapeutic potential. Hence, start treatment as soon as possible.

ESCORPION POISONING

All scorpions of medical relevance in Brazil are of the genus *Tityus* and can be found throughout the country. However, the most serious cases of poisoning are caused by the genus *Tityus serrulatus* ("escorpião-amarelo").

Local manifestations are the most frequent and include:

- Immediate pain on member of different intensities;
- perspiration and paraesthesia.

Systemic manifestations are less common and include, particularly in children:

- excessive sweating, shaking, hypothermia or hyperthermia;
- apathy or agitation;
- nausea and vomiting, drooling, abdominal pain;
- arterial hypertension or hypotension, cardiac arrhythmias, heart failure, shock;
- tachypnea, dyspnoea and pulmonary oedema.

Phoneutria POISONING

Phoneutria poisoning can occur throughout the country (Brazil), particularly in the South and Southeast. Similar to scorpion poisoning, the following occur in most cases:

Local manifestations:

- Immediate pain on member of different intensities;
- Mild oedema and hyperemia;
- perspiration and paresthesia.

Systemic manifestations, particularly in children:

- excessive sweating, shaking, hypothermia or hyperthermia;
- apathy or agitation;
- nausea and vomiting, drooling, abdominal pain, priapism;
- arterial hypertension or hypotension, cardiac arrhythmia, heart failure, shock;
- tachypnea, dyspnoea and pulmonary oedema.

Loxosceles POISONING

Spiders of the genus *Loxosceles* can be found throughout the country (Brazil), but *Loxosceles* poisoning occurs mainly in the South.

Most local manifestations, which are of a gradual and slow progression, are:

- oedema induratum and erythema (approx. 6 hours after bite) with local pain;
- hemorrhagic or ischemic areas 12 to 36 hours after bite;
- necrotic ulcer, sometimes with secondary infection.
- Occasionally fever and scarlatiniform exanthema.

Systemic manifestations are characterized by intravascular haemolysis that includes:

- anaemia, icterus and dark urine due to hemoglobinuria;
- disseminated intravascular coagulation;
- acute renal insufficiency.

CONTRAINDICATIONS

There are practically no contraindications. In patients with a history of allergy or sensitivity to horse serum, the intravenous administration of ANTI-ARACHNIDIC SERUM should be done under close medical supervision.

DRUG INTERACTIONS

Concomitant drugs are not contraindicated, but the patient's physician should be informed of all medications the patient is taking.

ADVERSE REACTIONS

The following reactions may occur therefore it concerns a heterologous serum:

a) Early reactions

Their frequency may vary and occur during the serum infusion or within the first 24 hours of administration. These reactions of an anaphylaxis and anaphylactoid nature may be serious and require medical care. Patients previously treated with horse serum are more prone to adverse reactions.

Prevention of adverse reactions:

1. Get to know the patient's history as to the previous use of heterologous serum (anti-tetanus, anti-rabies, anti-ofidic) and allergic events. Should that be the case, evaluate the potential for adverse reactions and the administration of antihistamines (H₁ and H₂ antagonists) and corticosteroids 15 minutes prior to serum administration according to recommended dosage.
2. Hypersensitivity test is not conducted because it proved ineffective in treatments using heterologous serum. It may also trigger adverse reactions and only delays serum therapy.

Treatment of early reactions

Once adverse reaction has established, discontinue serum therapy and start treating the reaction. In the event of generalized urticaria, asthmatic attack, glottic oedema and shock, immediately administer aqueous adrenaline 1:1000, subcutaneously or intramuscularly, a dose of 0.3 mL to 0.5 mL in adults and 0.01 mL/kg in children, which can be repeated every 5 minutes or 10 minutes according to need. In the event of asthma attack, it is also recommended the administration of inhalation bronchodilators or parenteral administration of aminophylline. Corticosteroids and antihistamines play a secondary role in the control of these reactions and can be used. Resume serum therapy after hypersensitivity remission.

b) Late reactions

In general, they are benign and occur between 5 days and 24 days after serum administration. They are characterized by fever, urticaria, arthralgia, adenomegaly and, more rarely, neurological or renal compromising. They are also known as "Serum sickness" and treated with corticosteroids, analgesics and antihistamines.

DOSAGE

Administer ANTI-ARACHNIDIC SERUM as soon as possible according to recommended dosage.

DOSAGE AND ROUTE OF ADMINISTRATION

SCORPION POISONING: CLASSIFICATION ACCORDING TO SEVERITY, CLINICAL MANIFESTATIONS AND SPECIFIC TREATMENT

CLASSIFICATION	CLINICAL MANIFESTATIONS	Serum Therapy (no. of ampoules)
MILD*	• Local pain and paresthesia	-
MODERATE	• Intense local pain together with one or more other manifestations, such as nausea, vomiting, mild perspiration and drooling, agitation, tachypnea and tachycardia	2 to 3 IV
SEVERE	• Besides the moderate manifestations above, one or more of the following: intense and incoercible vomiting, intense perspiration, intense drooling, apathy, convulsion, coma, bradycardia, heart failure, acute pulmonary oedema and shock.	4 to 6 IV **

* Observation period in stung children: 6 to 12 hours

**4 ampoules are sufficient in most severe cases once they neutralize the circulating venom and keep high levels of circulating anti-venom for at least 24 hours after administration.

Phoneutria POISONING: CLASSIFICATION ACCORDING TO SEVERITY, CLINICAL MANIFESTATIONS AND GENERAL AND SPECIFIC TREATMENTS

CLASSIFICATION	CLINICAL MANIFESTATIONS	GENERAL TREATMENT	SERUM THERAPY (No. of ampoules)
MILD*	• In most cases local pain, sometimes with tachycardia and agitation	Observation period up to 6 hours	-
MODERATE	• Intense local pain together with occasional perspiration and/or vomiting and/or agitation and/or arterial hypertension	Hospitalization	2 to 4 IV (children)
SEVERE	• Besides the ones above, one or more of the following: intense perspiration, drooling, frequent vomiting, muscular hypertonia, priapism, shock and/or acute pulmonary oedema.	Intensive Care Unit	5 to 10 IV

Loxosceles Poisoning: CLASSIFICATION ACCORDING TO SEVERITY, CLINICAL MANIFESTATIONS AND GENERAL AND SPECIFIC TREATMENTS

CLASSIFICATION	CLINICAL MANIFESTATIONS	TREATMENT
MILD*	• <i>Loxosceles</i> could be identified as the poisoning agent • Uncharacteristic lesion • No alterations in health condition • No alterations in lab results	Symptomatic: Follow-up up to 72 h after bite*.
MODERATE	• With or without identification of poisoning agent • Suggestive or characteristic lesion • Systemic alterations (exanthema, petechiae) • No alterations in lab results indicating haemolysis	Serum Therapy: 5 ampoules IV and/or Prednisone: Adults 40 mg/day; Children 1 mg/kg/day for 5 days.
SEVERE	• Characteristic lesion • Alterations in health condition: acute anaemia, Jaundice • Fast progression • Alterations in lab results indicating haemolysis	Serum Therapy: 10 ampoules IV And Prednisone: Adults 40 mg/day; Children 1 mg/kg/Day for 5 days.

* classification may change during this period

It is recommended the intravenous administration of serum, diluted or not, be infused for 20 to 60 minutes under strict medical supervision. When this route of administration is not possible, administer serum subcutaneously. The need for additional doses is rarely needed.

SPECIAL RECOMMENDATIONS

In scorpion and *Phoneutria* poisoning, the following medicines can be used to alleviate pain:

- Local infiltrating anesthetic with 2% lidocaine without adrenaline, 1 mL to 2 mL in children and 3 mL to 4 mL in adults; repeat up to 3 times according to need;
- Warm compresses applied to the bite site;
- Analgesic administered orally;
- Depending on pain, analgesics can be administered parenterally, such as meperidin 1mg/kg of weight in children and 50 to 100mg in adults.

STORAGE

Store at 2 °C to 8 °C (35.6°F - 46.4°F). **DO NOT FREEZE.**

EXPIRY DATE

The expiry date of the ANTI-ARACHNIDIC SERUM is three years from the manufacturing date when stored at 2 °C to 8°C (35.6°F - 46.4°F) as recommended on the packaging.

Registration Number: 1.2234.0012

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