

Snake Venom Antiserum (West Africa)

Monovalent, Enzyme Refined Equine Immunoglobulins
(Lyophilized)

(Echis Ocellatus)



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Snake Venom Antiserum (West Africa)

Snake Venom Antiserum Echis Ocellatus

(10 mL-Liquid/Lyophilised, Polyvalent,
Enzyme Refined, Equine immunoglobulins)

Description

Snake Venom Antiserum Echis is a sterile preparation containing equine immunoglobulin fragments F (ab')₂. Freeze dried powder when reconstituted with 10mL of Sterilised Water for Injections B.P. supplied along with the vial.

Each 1mL has capacity of specifically neutralizing 40 LD₅₀ of Echis ocellatus venom.

The antitoxic equine immunoglobulin and their derivatives are obtained from the serum of healthy equines immunized against venom of the above species of snake.

Reconstitution of Lyophilised Antiserum

The antivenom is supplied in liquid as well as freeze dried form. The freeze dried powder is reconstituted with 10 mL of Sterilised Water for Injections B.P. supplied with this pack. The whole content of freeze dried powder dissolves into a clear colourless or pale yellow liquid.

Administration and Dosage

Reconstituted antivenin is administered as soon possible if clear-cut signs/symptoms of envenomation are evident. It can be administered in two ways:

1. Intravenous injections: Reconstituted antivenin is administered by slow intravenous injection (1-2 mL/minute).

2. Infusion: Reconstituted antivenin is diluted in isotonic saline or glucose solution, 5-10 mL/Kg body weight.

At present there is no simple method to measure the amount of circulating venom in the body, therefore the antivenom dose cannot be accurately recommended. The dose also depends on severity of envenomation. In consideration to the requirement of venom neutralization fast, two vials are usually injected directly by I.V. route slowly .i.e. 1-2 mL/minute (taking care of sensitivity reaction). Two more vials are given after half an hour to one hour, if the symptoms of envenomation persist. This way patient should be given doses (further dose can be given with Intravenous fluid) till the envenomation symptoms subside. The patient should be closely monitored for 2 hours. Local administration of antivenin in or around the bite site is ineffective, painful, and may raise intra compartmental pressure, particularly in the digits. Hence it is not recommended.

Snakebite Manifestations

In case of Echis ocellatus, paralytic manifestations are uncommon (though they have occasionally been reported with Russell's viper). The usual manifestations comprise persistent pain and swelling of the bitten limb with oozing of blood from the bitesite. There may be blister formation and necrosis. This is followed by generalized vascular injury with severe external and internal haemorrhage. Vomiting may occur. Death usually results from cardiovascular shock or renal failure.

Antivenin Reactions

Anaphylaxis is life-threatening, but if the correct protocol is followed, it can be effectively treated and dealt with.

Anaphylaxis can be of rapid onset, and can deteriorate into a life-threatening emergency very quickly. The patient should be monitored closely, and at the first sign of any of the following, antivenin should be discontinued, and 0.5 mg of 1:1000 adrenaline must be administered intramuscularly: urticaria, itching, fever, chills or rigor, nausea, vomiting, diarrhea, abdominal cramps, tachycardia, hypotension, bronchospasm, and angioedema. Children must be given 0.01 mg/Kg body weight of adrenaline I.M.

In addition, to provide longer term protection against anaphylactoid reaction, 100 mg of hydrocortisone and 10 mg of H1 antihistamine can be given I.V. The dose for children is 0.2 mg/Kg of antihistamine I.V. and 2 mg/Kg of hydrocortisone I.V. If after 10 to 15 minutes, the patient's condition has not improved, or if the condition is worsening, a second dose of 0.5 mg of adrenaline 1:1000 I.M. may be given. In the vast majority of cases, no more doses will be required. If there is hypotension or haemodynamic instability. I.V. fluids should be given. Once the patient has recovered, the antivenin can be restarted slowly for 10-15 minutes keeping the patient under close observation. Then the normal drip rate can be resumed. Serum sickness reactions sometimes occur. But these usually take a few days to a week, and can be easily treated with oral antihistamines and corticosteroids (for e.g., prednisolone-adults 5 mg 6 hourly; child 0.7 mg/Kg/day).

Associated Treatment:

Snake bite can cause moderate to severe pain in at the bite site. This normally responds well to paracetamol. Aspirin and nonsteroidal anti-inflammatory drugs (NSAIDs) should not be administered, as they can exacerbate bleeding. Mild opiates (such as tramadol 50 mg) can be administered, for severe pain.

Storage:

Store the freeze dried preparation in a cool and dark place and avoid exposure to excessive heat. Reconstituted liquid should not be stored for long nor should be allowed to freeze. 10 mL liquid vials should be stored at 2°C to 8°C. DO NOT FREEZE. Protect from light. Keep out of reach of children.

Presentation

Snake venom antiserum Echis as supplied is freeze dried powder in glass vials. Sterilised Water for Injections B.P. is supplied in 10 mL vials.

The antivenom is also supplied as 10 mL liquid in glass vials.

Disposal

Left over antivenin and used empty vials should be discarded as biomedical waste.

Manufactured by:



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