**VINS - Snake Venom Antiserum (African)**

*(Lyophilised / Liquid - 10 mL, Polyvalent, Enzyme refined, Equine Immunoglobulin)*

**Description**
Snake Venom Antiserum (African) is a sterile preparation contains equine immunoglobulin fragments F(ab')2. Freeze dried powder is reconstituted in 10 ml of sterile water for injection supplied along with the vial. Each ml has power of specifically neutralizing the venoms of following species of snakes.

- Naja melanoleuca venom : 20LD50
- Naja nigricollis venom : 20LD50
- Naja haje venom : 25LD50
- Dendroaspis polyeptis venom : 25LD50
- Dendroaspis viridis venom : 25LD50
- Dendroaspis jamesoni venom : 25LD50
- Bitis gabonica venom : 25LD50
- Bitis arietans venom : 25LD50
- Echis leucogaster venom : 25LD50
- Echis ocellatus venom : 25LD50

The antitoxic equine Immunoglobulins and their derivatives are obtained from the serum of healthy equines immunized against venoms of above species of snakes. **Reconstitution of Lyophilised Serum**
The antiserum is supplied in liquid as well as in freeze dried form. The freeze dried powder is reconstituted with 10 ml of sterile water for injection supplied with this pack. The whole content of freeze dried powder dissolves into a clear colorless or pale yellow liquid.

**Administration / Dosage**
Reconstituted serum / liquid serum is administered as soon as possible after the snake bite by intravenous injection. The recommended initial dose is 20 ml by intravenous infusion. The injection should be given very slowly as 5 minutes by direct slow intravenous route (or) one hour by Infusion, diluted in 250 ml of infusion solution (0.9% Sodium Chloride solution or 5% glucose solution). A second dose may be given after one hour or two if the symptoms continue. Further doses are administered as required.

**First Aid for Snake Bite**
Snake bite victims must be given quick and positive first aid.
The patient must be removed to a well ventilated and quiet place and confidence infused. The patient must be assured that there is no reason to get alarmed.

Site of bite should be cleaned with water without rubbing and dressed up with antiseptics taking care not to rub the part. Bitten part should be immobilized. Apply a broad and firm antiseptic dressing / bandage. Take the patient to Hospital fast. Do not waste time on traditional treatment.

**Snake Poisoning & Serum Treatment**
In case of neurotoxic (Naja and Dendroaspis) poisoning there is creeping paralysis of muscles of eyelids, staggering gait, incoordination of speech, paralysis of limbs, drooping of head accompanied by nausea and vomiting. These symptoms are due to the predominance of neurotoxins. Death may result within minutes or several hours due to respiratory failure.

In case of haemotoxic (Bitis and Echis) poisoning no paralysis is observed. The poisoning is characterized by persistent pain and swelling with oozing of blood from the bite. This is followed by generalized vascular injury. Severe internal haemorrhage with tenderness and vomiting may...
occur. Death may result by intravascular clotting.

Only Snake Venom Antiserum can neutralize the venom in circulation. Hence the serum should be injected as early as possible.

Serum Reactions
Before treating the patient, it should be enquired whether any serum injection was administered earlier and whether the patient has a history of asthma, eczema or drug allergy. Serum sensitivity test may be carried out by injecting 0.1 ml of serum in 1:10 dilution subcutaneously and by observing for half an hour for any reactions either local or general.

In allergic patients Snake Venom Antiserum should be given with antihistamines.

Administration of serum in snake bite victims has to be decided taking into consideration the severity of the condition of the patient. Urgency of treatment must override the danger of anaphylaxis. In such cases 1 ml of 1:1000 adrenaline may be given intramuscularly.

Delayed Reactions
Serum sickness like reactions after the administration of heterologous proteins may occur about six days after the beginning of treatment. They consist of an inflammatory reaction due to complement activation and formation of immune complexes (type III hypersensitivity reaction). Clinical symptoms are fever, pruritus, rash or urticaria, adenopathy and arthralgia. Serum sickness is treated by administering corticosteroids (e.g. 1 mg/kg of methylprednisolone followed by diminishing dosage) and antihistamines.

Associated treatment
Sedatives and analgesics will relieve pain and nervousness in case of viper poisoning. Corticosteroids may be administered to minimize the serum and allergic reactions. Local sepsis may be prevented by antibiotic treatment. Normal saline or plasma infusions are recommended in near collapsing patients. In case of respiratory paralysis tracheotomy and positive pressure ventilation are additional measures.

Storage
Store the freeze dried preparation in a cool, 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 between 2°C and 8°C. DO NOT FREEZE.

Presentation
Snake Venom Antiserum (African) is supplied as freeze dried powder in glass vials. Water for Injection is supplied in 10 ml vials. Snake Venom Antiserum is also supplied as 10 ml liquid in glass vials.

Disposal
Left over Snake Venom Antiserum and used empty vials shall be disposed off as biomedical waste.