

Snakebite Protocol Western Cape: Assessment

It may be difficult and confusing to identify the snake responsible. ***DON'T Bother. Identify the VENOM.*** An accurate diagnosis can be made on the basis of clinical signs and symptoms.

VENOM Categories			
Neurotoxic	Cytotoxic	Haemotoxic	Mixed

	Significant common snakes in Western Cape	Significant other South African Snakes not native to Western Cape but likely to be kept by Herpetophiles	Exotic Snakes not native to Southern Africa but commonly kept by Herpetophiles:
Neurotoxic	<p>Cape Cobra Blacknecked Spitting Cobra Rinkhals Covered by Polyvalent Antiserum (PVA)</p> <p><u>Berg Adder</u> not covered by PVA. This will exhibit specific Cranial Nerve Palsies.</p>	<p>Black Mamba Green Mamba, Egyptian Cobra Forest Cobra</p> <p>All covered by PVA</p>	<p>Coral Snake</p> <p>Antiserum has ceased production. Supportive measures only.</p>
Cytotoxic	<p>Puff Adder Covered by PVA</p>	<p>Gaboon Viper, Mozambique Spitting Cobra (Mfezi) Covered by PVA <u>Night Adder</u> <u>Stiletto Snake</u> no antivenom</p>	<p>Rattlesnake group. Rattlesnakes Cottonmouth Copperhead</p> <p>Ovine-based antiserum, FAB AV, available on enquiry</p>
Haemotoxic	<p>Boomslang These Snakes are common but envenomations are rare. Covered only by Monovalent Boomslang</p>	<p>Vine Snake No antivenom</p>	<p>Rattlesnake group.</p> <p>Ovine-based antiserum, FAB AV, available on enquiry</p>

	Antivenom.		
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In practice, 95% of bites will be Puff Adder or Cape Cobra

Use a standard ATLS approach:

Assess-Intervene-Reassess-: Assessment & Management occur in tandem.

The goal is to determine:

1. *Has envenomation occurred?*
 No: No marks seen on skin OR asymptomatic after an hour
 Otherwise suspect envenomation.
2. *Are there clinical symptoms consistent with one of the three main types of envenomation in South Africa?*

Neurotoxic.	Cytotoxic.	Haemotoxic.
Ptosis paraesthesia, weakness paralysis and finally respiratory failure.	Severe pain, swelling, bruising at bite site and extending to regional lymph nodes	Bleeding from bite site, ecchymoses, signs and lab results of DIC and renal failure

3. *Do the symptoms suggest one of the venoms covered by SAIMR Polyvalent antiserum ?*
4. *Are the symptoms severe enough to warrant antivenom?*

Note that snake handlers who are clumsy enough to get bitten by their charges nevertheless can usually accurately identify the offending snake.

Note that there are numerous other venomous snakes such as skaapstekers , night adders and horned adders which cause minor symptoms of envenomation, are not lethal, and for which PVA is neither available nor necessary.

DeMist handover from ambulance
AIRWAY
TRIAGE PATIENT USING SATS SCORE

Examination:

Primary Assess ABCDE's Then Secondary Head-to-Toe Examination

Specifically for Snakebites :

AIRWAY AIRWAY AIRWAY: Patient on side and suction if any chance of airway compromise by inability to clear saliva

Hypersalivation

Oculomotor palsies

Breathing: Respiratory Muscle Paralysis

Signs of unusual Bleeding suggestive of coagulopathy

Neurological examination, with emphasis on cranial Nerves

Swelling and dermal necrosis of limbs

Systemic signs of Oligaemic shock

Attach: Monitors, ECG, SpO2, BP, Urine catheter As needed

SAMPLE HISTORY

Signs & Symptoms: see Above

Allergies (Particularly important if Antivenom is likely)

Medications

Past Medical History

Previous Snakebites

Last meal

Events: Type of Snake . Circumstances of Bite. Where bite occurred geographically. Associated trauma

INVESTIGATIONS

Hb

Urine Dipstix

FBC CPK

U&E Creatinine

DIC Screen

Very Important: Platelets, Creatinine

FIRST AID

Attention to AIRWAY

Assisted Ventilation if patient unable to breathe

Immobilise the body part

Pressure dressings are controversial

Eye envenomation: Copious irrigation with water

Do NOT apply a tourniquet

Do NOT incise the wound

Do NOT administer Antivenom outside the hospital setting

ANTIVENOM

Administer if strong suspicion or evidence of significant envenomation

Give antivenom IV, not IM.

Anaphylaxis or serum sickness may result, so Antivenom should only be given in hospital, with adequate medications available to treat anaphylaxis

No test dose needed. But

- Install an IV line.
- Doctor should administer antivenom personally thru this by slow IV injection.
- Watch for allergy: itching, bronchospasm, paraesthesiae around lips, urticaria. If any of these occur, stop the injection, & give adrenalin IM.

Treat allergy with IV Cortisone, Phenergan & IM Adrenalin. These should be drawn up & ready if patient has an allergic history or previous snakebite.

Polyvalent antiserum will cover mambas, cobras, Puffadder, Gaboon Viper. May need up to 80 ml, ie 8 ampoules.

Monovalent antiserum for Boomslang: may need 10 ampoules.

It is important to give an adequate dose, especially for puffadders

ANALGESIA

Morphine IV: 10mg in 10ml water.

Bolus 2mg every 30 minutes. Titrate to analgesic effect.

Antibiotics: No. Snake venom is bactericidal.

DISPOSAL

Suspected but not obvious envenomation: Admit overnight, observe., elevate limb.

If no progression of symptoms: Home next day.

If Cytotoxic dermonecrosis: refer surgeons

If Neurological symptoms: Send to ICU, Refer surgeons.

If suspected haemotoxic / Boomslang bite, refer Medicine. Patient may need haematological management and dialysis.

Important Numbers:

Antivenom Unit SAVP (Pty) Ltd: 011 386 6000 Fax 011 386 6016

Dr Philip Cohen 082 5611223

Exotic North American Snakes: Online Antivenin Index USA 301 562 0777

American Association of Poison Control Centers USA 1 800 2221 1222