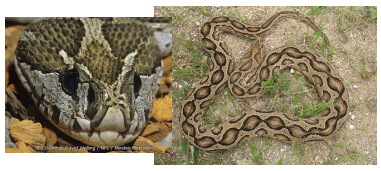
MANAGEMENT OF SNAKE BITE AND ENVENOMING

Identification Of Medically Important Land Snakes In Sri Lanka



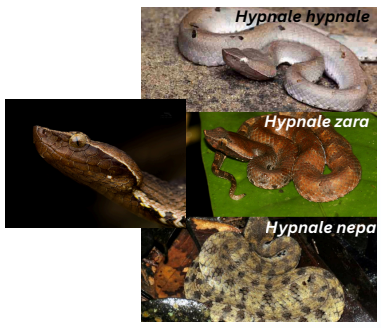
Russell's viper
(*Daboia russellii*)
- Inverted "V" shaped mark at dorsal head
- 3 longitudinal rows of dark brown oval patches along the body

Saw-scaled viper
(*Echis carinatus*)
- Bird foot mark in the dorsal head
- Saw scaled brownish snake

Cobra
(*Naja naja*)
- Expandable hood with 2 black spots in ventral side, dorsal side with spectacle marking
- No enlarged hexagonal vertebral scales
- Subcaudals divided

Common krait
(*Bungarus caeruleus*)
- Enlarged Hexoagonal vertebral scale
- Shiny black dorsum with narrow paired white bands with white ventral side

Ceylon krait
(*Bungarus ceylonicus*)
- Enlarged Hexoagonal vertebral scale
- Shiny black dorsum with wide single white bands with brown white ventral side

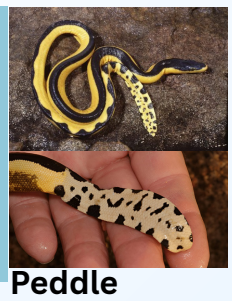


Hump nosed viper-*Hypnale* species
(*Hypnale hypnale , Hypnale zara, Hypnale nepa)*
- Hump at the tip of the snout
- Brown colour triangular head covered with large scales
- A pit between eye and nostril

Green pit viper
(*Craspedocephalus trigonocephalus*)
- Bright green colour body, black corrugated appearance in the dorsum
- Triangular head with loreal pit
- Head coverd with numerous small scales

- Sri Lanka, being a tropical island, harbours approximately 107 species of snakes.
- According to the World Health Organization (WHO) classification, 10 medically important land snake species have been identified in Sri Lanka.
- Each year, an estimated 40,000 snakebite cases are reported, resulting in approximately 100 deaths annually.

Sea snakes
- Main identification feature is peddle shape tail
- Approximately 15 species of sea snakes have been reported in Sri Lankan coastal waters.
- All are highly venomous


Peddle

Management of Snake Bite Envenoming

1) Triage & Stabilization (ABCDE approach)

2) Monitor parameters

Level of consciousness. Pulse rate. Blood pressure
Oxygen saturation. Temperature. Respiratory rate& tidal volume
Urine output and fluid balance

3) Asses the signs of envenomation

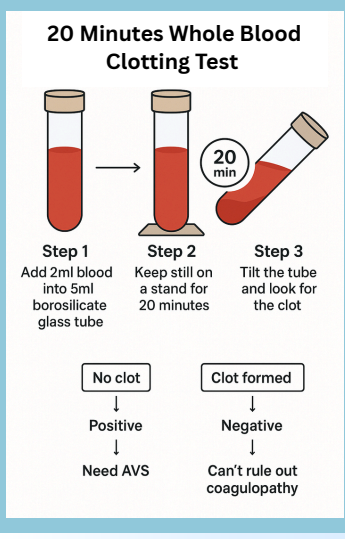
Local effects	Systemic-nonspecific	Systemic-specific
Local pain	Abdominal pain	Neurotoxicity
Swelling	Nausea & vomiting	Nephrotoxicity
Blistering	Significant headache	Spontaneous bleeding / Coagulopathy
Compartment syndrome		Rhabdomyolysis with myoglobinuria
Tissue necrosis		Cardiac toxicity

4) Identification of the snake

Dead/live specimen.
Photo/videograph.
Syndromic approach

5) Investigations
- 20 minute whole blood clotting test (20MWBCT)
- PT/INR & clotting profile
- Serum Creatinine, Serum Electrolytes
- Liver profoile (ALT,AST)
- WBC-Polymorphonuclear leukocytosis
- ECG etc

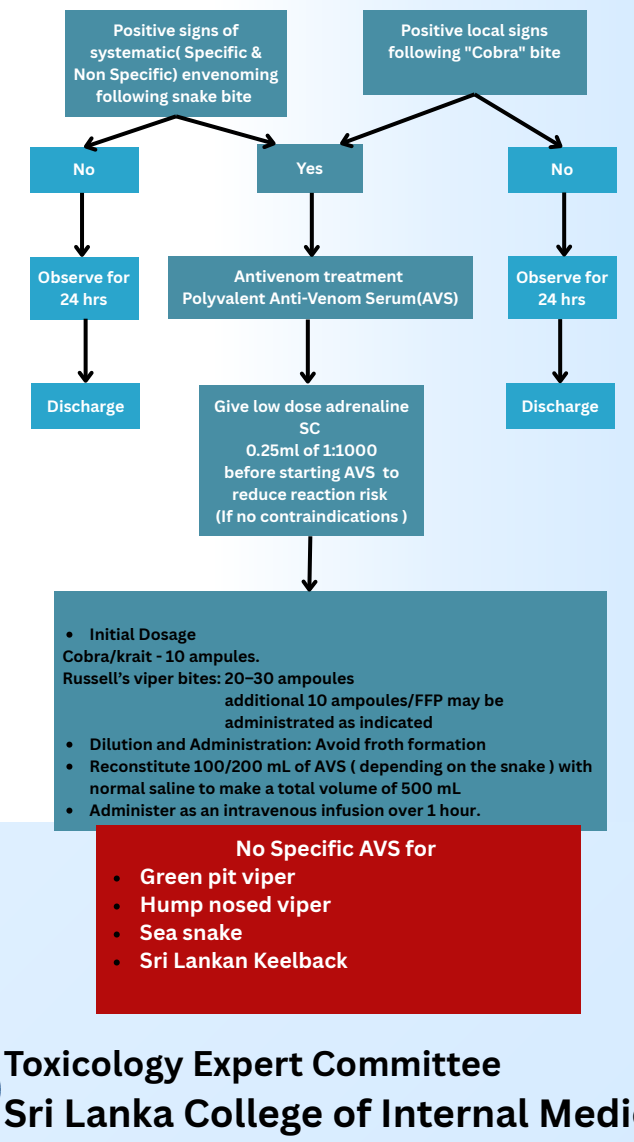
If there is a clot can't rule out coagulopathy. Need to look for clinical and laboratory evidence



Syndromic Approach Of Snake Identification

Sri Lankan Keelback
- Recently identify as medically important
- Orange colour head with brown colour blotches in grey colour body
- Have mild systemic and coagulopathy features

Antivenom Treatment



- Initial Dosage
Cobra/krait - 10 ampules.
Russell's viper bites: 20–30 ampoules
additional 10 ampoules/FFP may be administrated as indicated
- Dilution and Administration: Avoid froth formation
- Reconstitute 100/200 mL of AVS (depending on the snake) with normal saline to make a total volume of 500 mL
- Administer as an intravenous infusion over 1 hour.

No Specific AVS for
- Green pit viper
- Hump nosed viper
- Sea snake
- Sri Lankan Keelback

Toxicology Expert Committee
Sri Lanka College of Internal Medicine