

# STATE TOXINOLOGY SERVICES

Toxinology Dept., Women's & Children's Hospital, North Adelaide SA 5006 AUSTRALIA

## SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT

www.toxinology.com record number SN0124

Family                                      Scientific name combined  
Viperidae                                  *Tropidolaemus wagleri*  
Common name  
Wagler's Pit Viper , Temple Pit Viper , Speckled Pit Viper

Global region in which snake is found

### CLINICAL OVERVIEW

Bites by Wagler's pit viper are often minor, but may cause local effects, varying from minor pain and swelling, to severe pain, extensive swelling, oozing, numbness, even necrosis, but significant systemic effects do not appear to occur. It is unclear if this snake can cause human fatalities. No specific antivenom is available.



# STATE TOXINOLOGY SERVICES

Toxinology Dept., Women's & Children's Hospital, North Adelaide SA 5006 AUSTRALIA

## **SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT**

### **SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT (continued)**

*Tropidolaemus wagleri*

#### **First aid**

1. After ensuring the patient and onlookers have moved out of range of further strikes by the snake, the bitten person should be reassured and persuaded to lie down and remain still. Many will be terrified, fearing sudden death and, in this mood, they may behave irrationally or even hysterically. The basis for reassurance is the fact that many venomous bites do not result in envenoming, the relatively slow progression to severe envenoming (hours following elapid bites, days following viper bites) and the effectiveness of modern medical treatment.
2. The bite wound should not be tampered with in any way. Wiping it once with a damp cloth to remove surface venom is unlikely to do much harm (or good) but the wound must not be massaged.
3. All rings or other jewellery on the bitten limb, especially on fingers, should be removed, as they may act as tourniquets if oedema develops.
4. The bitten limb should be immobilised as effectively as possible using an extemporised splint or sling; if available, crepe bandaging of the splinted limb is an effective form of immobilisation.
5. If there is any impairment of vital functions, such as problems with respiration, airway, circulation, heart function, these must be supported as a priority. In particular, for bites causing flaccid paralysis, including respiratory paralysis, both airway and respiration may be impaired, requiring urgent and prolonged treatment, which may include the mouth to mask (mouth to mouth) technique of expired air transfer. Seek urgent medical attention.
6. Do not use Tourniquets, cut, suck or scarify the wound or apply chemicals or electric shock.
7. Avoid peroral intake, absolutely no alcohol. No sedatives outside hospital. If there will be considerable delay before reaching medical aid, measured in several hours to days, then give clear fluids by mouth to prevent dehydration.
8. If the offending snake has been killed it should be brought with the patient for identification (only relevant in areas where there are more than one naturally occurring venomous snake species), but be careful to avoid touching the head, as even a dead snake can envenom. No attempt should be made to pursue the snake into the undergrowth as this will risk further bites.
9. The snakebite victim should be transported as quickly and as passively as possible to the nearest place where they can be seen by a medically-trained person (health station, dispensary, clinic or hospital). The bitten limb must not be exercised as muscular contraction will promote systemic absorption of venom. If no motor vehicle or boat is available, the patient can be carried on a stretcher or hurdle, on the pillion or crossbar of a bicycle or on someone's back.
10. Most traditional, and many of the more recently fashionable, first aid measures are useless and potentially dangerous. These include local cauterization, incision, excision, amputation, suction by mouth, vacuum pump or syringe, combined incision and suction ("venom-ex" apparatus), injection or instillation of compounds such as potassium permanganate, phenol (carbolic soap) and trypsin, application of electric shocks or ice (cryotherapy), use of traditional herbal, folk and other remedies including the ingestion of emetic plant products and parts of the snake, multiple incisions, tattooing and so on.

## **SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT**

### **SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT (continued)**

*Tropidolaemus wagleri*

#### **Clinical summary**

Wagler's pit viper causes an unknown number of bites throughout its range, but bites are unlikely to be rare. Case report data indicates that about 50% of bites are trivial and in the remainder, local envenoming predominates. It is unclear if this snake is able to inflict a fatal bite.

Bites are characterised by local pain, swelling, bleeding, numbness and occasional necrosis. Systemic effects are not documented.

## **SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT**

### **SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT (continued)**

*Tropidolaemus wagleri*

#### **Treatment summary**

As the spectrum of envenoming by these snakes is poorly defined, even though they are not rare, it would be prudent to observe all cases for at least 12 hrs and to test for coagulopathy.

Insert an IV line and give an initial IV fluid load. Observe for significant local effects, particularly major swelling, compartment syndrome and necrosis. Manage the latter with good wound care and debridement once safe to do so. In the event of compartment syndrome being suspected, confirm with pressure measurement before considering the wisdom of performing a fasciotomy.

While no specific antivenom is available, should major envenoming occur, particularly if there is major coagulopathy, consider using a non-specific antivenom in the hope (unproven benefit) it may offer at least some neutralising capacity. The antivenom we have listed is the Thai Red Cross Green Pit Viper AV. An initial dose would be 4-6 vials. We stress that neither this nor any other antivenom are of proven benefit for envenoming by *Tropidolaemus* species and before using this antivenom, the possible but uncertain benefits should be carefully considered in light of the potential adverse effects. If antivenom is to be used, ensure adrenaline & resuscitation equipment is ready, in case of adverse reactions. If it is decided to manage coagulopathy without using antivenom, the role and effectiveness of cryoprecipitate, FFP and heparin are all uncertain, though the latter is usually most unhelpful in treating snakebite.

# STATE TOXINOLOGY SERVICES

Toxinology Dept., Women's & Children's Hospital, North Adelaide SA 5006 AUSTRALIA

## **SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT**

## **SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT**

### **SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT (continued)**

*Tropidolaemus wagleri*

#### **Available antivenoms**

Green Pit Viper Antivenin

(Note this antivenom is not specific and is not proven to work for Wagler's pit viper envenoming. It is perhaps the most likely non-specific antivenom to work for bites by this species, but effectiveness remains most uncertain.)

Science Division, Thai Red Cross Society

Queen Saovabha Memorial Institute

1871 Rama IV Road

Pathumwan

Bangkok 10330

Thailand

Phone: ++66-2-252-0161 (up to 0164)

Fax: ++66-2-254-0212

Email:

Website: [www.redcross.or.th/index1ee.html](http://www.redcross.or.th/index1ee.html)

# STATE TOXINOLOGY SERVICES

Toxinology Dept., Women's & Children's Hospital, North Adelaide SA 5006 AUSTRALIA

## SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT

### SNAKEBITE MANAGEMENT OVERVIEW DOCUMENT (continued)

*Tropidolaemus wagleri*

#### Management Flowchart

