

# The Saw-scaled viper and its bites

*Echis carinatus* Schneider, 1801 (Viperidae)

Saw-scaled viper (E), vali polonga (S), suruttai pambu (T)

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## Introduction

The saw-scaled viper was first illustrated by Patrick Russel in 1796. It is one of the venomous snakes found in Sri Lanka and is responsible for most of the bites by a snake of medical importance in the Jaffna Peninsula. In Sri Lanka, saw-scaled vipers are responsible for 1 to 2% of the circa 37,000 snakebites reported to hospitals annually. The Sinhala name “vali polonga” means sand snake and refers to its habitat preference while the Tamil name “suruttai pambu” means coil snake and describes its striking position (Kularatne et al, 2011; Kasturiratne, 2005).



The saw scaled viper is a brownish snake with wavy white lines along both sides, white marks along the mid-back, and a characteristic cross-like, “bird’s foot” mark on the head.

Photo by Kalana Maduwage.

## Distribution

The Saw-scaled viper is distributed in the dry and sandy arid coastal plains of Sri Lanka. It is found near the sea in a number of Provinces— at Kalpitiya and Wilpattu National Park in the North-western, Mannar, Jaffna and Mullaitivu in

Saw-scaled viper bite is the leading venomous snakebite in the Jaffna peninsula; coagulopathy is the commonest manifestation

the Northern and in the Eastern Provinces. In the east the range extends to the south of the Ruhunu National Park (Yala) in the Southern Province, where it prefers a habitat of sparse vegetation (Kularatne et al, 2011).

## Epidemiology

The monthly distribution of probable cases and confirmed cases showed similar patterns. Bites were minimal in June to August (the dry and hot season) with a sharp rise during the northeast monsoon rainy season, particularly in January (Kularatne et al, 2011).

## Behaviour

It is an aggressive, nocturnal snake with a body length ranging from 25 to 35 cm. It is an active and irritable venomous snake that attacks and bites at the slightest provocation. The scales are rough, and the snake uses this feature to make a shrill sound when threatened; it coils itself and rubs its sides together. The dry bite rate is reported as relatively low (8%) (Kularatne et al, 2011).

## Clinical Profile

Saw scaled viper bites are usually on the fingers or the feet and toes of victims, commonly producing local swelling and occasionally blistering and necrosis at the site of the bite. The commonest systemic manifestation is

coagulopathy (in-coagulable blood detected by the 20WBCT). A small percentage of patients develop spontaneous bleeding manifested by bleeding from the gums, haematemesis, haemoptysis or haematuria. Acute kidney injury is reported rarely. There are no neurological manifestations caused by direct action of the venom.

Intracerebral haemorrhage, acute myocardial infarction and sinus bradycardia have been reported following systemic envenoming

caused by the Sri Lankan *Echis carinatus* (Fonseka et al, 2013; Pirasath et al, 2021; Varuni et al, 2019).

## Management

Indian polyvalent antivenom therapy is effective in correcting coagulopathy with the first dose of 10 vials, but in some cases repeated doses will be needed. There have been no confirmed deaths due to *E. carinatus* bite reported in Sri Lanka.

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September 2021