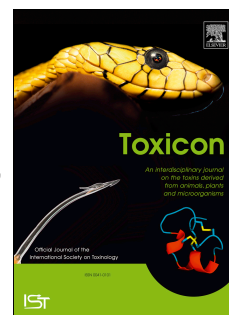


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**Challenges in diagnosing and treating snakebites in a rural population of Tamil Nadu, India:
the views of clinicians**

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Abstract

Snakebites cause death, disability and economic devastation to their victims, people who live almost exclusively in rural areas. Annually an estimated two million venomous bites cause as many as 100,000 deaths worldwide as well as hundreds of thousands of deformities and amputations. Recent studies suggest that India has the highest incidence of snakebite and associated deaths worldwide. In this study, we interviewed 25 hospital-based clinicians who regularly treat snakebites in Tamil Nadu, India, in order to gauge their opinions and views on the diagnostic tools and treatment methods available at that time, the difficulties encountered in treating snakebites and improvements to snakebite management protocols they deem necessary. Clinicians identified the improvement of community education, training of medical personnel, development of standard treatment protocols and improved medication as priorities for the immediate future.

Keywords: snakebite, venom, anti-venom, big four, diagnostics, clinicians

Introduction

Snakebites are one of the major neglected tropical medical challenges affecting rural populations worldwide with several million bites [1] and around 100,000 deaths each year [2]. India is one of the countries where snake envenomation is most prevalent, however snakebites in this country are poorly characterised [1-5]. The medically important snakes in India are considered to be the 'big four': the Russell's viper (*Daboia russelii*), saw-scaled viper (*Echis carinatus*), Indian cobra (*Naja naja*) and the common krait (*Bungarus caeruleus*), although other medically important snakes have also been reported [6-9].

The complexity of snake venoms and their combined action in victims pose considerable challenges to the treatment of bites. Currently, the only available treatment in rural India is polyvalent anti-snake venom (ASV) raised in either horses or sheep against the venoms of the big four. The efficacy of this ASV against the venom of snakes that are not one of the big four and big four