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GUEST EDITORIAL

Introductory editorial: Snakebite CME series

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This introduction and editorial addresses the latest approaches to safe management of snakebite in South Africa (SA), and shares the evidence and expert consensus from the recent SA Snakebite Symposium (SASS) meeting held in July 2022.

Snakebite is recognised by the World Health Organization (WHO) as a neglected tropical disease.[1-3] Due to poor-quality data accrual, statistics on snakebite in SA, with the dichotomous health system, and limited specific data on trauma in the District Health Information System, there are no accurate incidence data of snakebite in general and serious or fatal envenomation in particular, although estimates and formulae to calculate the numbers are available.[4] The WHO estimates that data on bites and deaths for Africa as a whole reflect over 200 000 bites and more than 30 000 deaths annually.[4]

SA has over 170 species of snakes, but of these around 20 comprise the 'dangerous and deadly' category. Regarding management of snake envenomation, the WHO Africa document is now more than 10 years old, covers aspects of management that are not specific to SA and mentions treatment options that may no longer be accepted or available.[1]

Furthermore, treatment strategies that apply to snake envenomation from the Americas, Middle East, Asia and Australasia are inappropriate for Africa, owing to species and venom-action variance, or the significant antivenom differences. There have been a number of local publications, case reports and retrospective studies over the recent decades, reported between 2005 and 2021, but no consolidated national advisory document since the Shrire *et al.*[4] publication, through the SA Vaccine Providers group in 1996.[4-19]

In an attempt to address this shortfall, the SASS was arranged held in Nelspruit on 29 and 30 July 2022 with the aim to address gaps in the management of snakebite in the local environment. This followed from the similar meetings held in eSwatini that resulted in a Swazi National Document for management of snakebite focused on their local snake species.[20]

The National Snakebite Advisory Group (listed at the end of this editorial along with the SASS panel) was already in existence to assist in clinical advice, medical support and optimising patient management after snakebite.[21] This group is a voluntary team of medical, veterinary and herpetology experts with an interest in snakebite management of both humans and animals. Their mission is to be available to offer timely support to treating medical teams, emergency service personnel and poison centres around SA. This group enthusiastically endorsed the SASS and also engaged numerous clinical groups and professional societies to support and endorse the recommendations that were agreed upon at the SASS as the national consensus document.

Resulting from the multidisciplinary 2-day meeting and the many pre-meeting online round-robin sessions, a set of consensus diagnosis and treatment guidelines are proposed on the current best local available evidence for both human and animal envenomation. This series of CME articles focuses on the human treatment guidelines and is presented in a format that addresses the entire patient journey. The articles commence with the layperson or non-professional 'first-aider' level, along with the pre-hospital emergency care aspects. The emergency department and in-hospital definitive management – both medical and surgical – follows. This includes recent developments in the understanding of particularly cytotoxic envenomation and surgical care, which are included in the recommendations.

Collaborators of the SASS Consensus Group
Mr Arno Naude – independent herpetologist: Snakebite Assist
Mr Chris Hobkirk – SASS organising committee, Lowveld Venom Suppliers
Mr Chris Cooke – herpetologist, Hoedspruit Reptile Centre
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Dr Morne Strydom – Department of Clinical Pharmacology, University of Pretoria
Mr Jason Seale – reptile curator, Hartebeespoortdam Snake and Animal Park
Mr Andrew Sheahan – emergency care practitioner with an interest in environmental medicine
Ms Thea Litchke-Koen – eSwatini Antivenom Foundation
Dr Sara Padidar – eSwatini Antivenom Foundation and University of eSwatini
Mr Jonathan Leeming – independent venom specialist
Ms Hiral Naik – Save the Snakes SA
Dr Jessica Briner – veterinarian, Briner Veterinary Services
Dr K G M de Kramer – veterinarian, Rant-en-Dal Hospital and Onderstepoort, University of Pretoria
Dr Jo-Anne Gibb – veterinarian, Vet on 66
Prof. Andrew Leisewitz – veterinarian, internal medicine, Onderstepoort, University of Pretoria
Mr Michael Perry – herpetologist

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Ms Thea Litschka-Koen (eSwatini Antivenom Foundation)
Dr Jonathan Pons – ophthalmologist, eSwatini
Other:
Mr Michael Perry – herpetologist, African Reptiles and Venom
Mr Johan Marais
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