

Presented at the ACMT Annual Scientific Meeting 2021 – Virtual

Published in J Med Tox 2021; 17:100-101

021. Clinical Presentations, Treatments, and Outcomes of Exotic Snake Envenomations in the United States

Jack E Basse¹, Spencer Greene², Anne-Michelle Ruha³, Kevin Baumgartner¹, Michael E Mullins¹, Paul Wax⁴, Jeffrey Brent⁴, Sharan Campleman⁴, Evan S Schwarz¹, On Behalf of the ToxIC Investigators Consortium (ToxIC)

¹ Washington University School of Medicine, St. Louis, MO, USA.

² University of Houston College of Medicine, Houston, TX, USA.

³ Banner University Medical Center Phoenix, Phoenix, AZ, USA.

⁴ American College of Medical Toxicology, Phoenix, AZ, USA.

Background: Exotic snake envenomations in the United States are uncommon, and antivenoms for non-native snakebites are not typically available in hospital pharmacies.

Research Question: This study described the clinical presentations, treatments, and outcomes of exotic snake envenomation cases reported to the Toxicology Investigators Consortium's (ToxIC) North American Snakebite Registry (NASBR).

Methods: This is a descriptive study that reviewed all non-native envenomations reported to the NASBR from 2013 to 2019. Data abstracted included snake species, patient history, clinical signs, diagnostics, treatment (including antivenom usage), follow-up, and final outcome.

Results: Eighteen non-native snakebites were reviewed, resulting from encounters with eleven different species, eight of which belonged to the Viperidae family. The most common presenting symptoms were edema (17 patients), ecchymosis (10 patients), and necrosis (four patients). Systemic effects and hematologic abnormalities were less common. The most commonly employed hospital treatments were noninvasive, but four patients did require mechanical ventilation. Eleven patients were treated with antivenom. Four victims of encounters with snakes for whom antivenoms exist received no antivenom. No patients died as a result of an encounter with an exotic snake; two experienced digit mobility loss, one experienced hand mobility loss, and one experienced permanent tissue loss of a small area on their finger.

Conclusion: While limited, the results of this study suggest that victims of exotic snake encounters in the US frequently present with soft tissue effects, and less frequently with systemic or hematologic effects. Antivenom is often used, although several patients for which a specific antivenom was indicated did not receive any. Long-term sequelae of such encounters are rare and usually consist of local mobility deficits.