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69. The ToxIC North American Snakebite Registry

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Background: Snakebite affects thousands of people in the USA annually and can cause significant morbidity and mortality. Despite the large impact on victims, current understanding of venom pathophysiology, predictors of severity, treatment strategies, and long-term outcome is limited. The Toxicology Investigators Consortium (ToxIC) North American Snakebite Registry (NASBR) was established to collect de-identified data regarding all aspects of snake envenomation.

Research question: Can the NASBR serve as a research tool to collect a large amount of data from multiple toxicology centers across the USA?

Methods: Data reported to the NASBR between March 1 and October 24, 2013 were reviewed. Results are reported using descriptive statistics.

Results: Eight sites representing seven states across the USA contributed 96 cases. One non-native bite was excluded. Of 95 subjects, 72 % were men. Sixty-nine percent 69 % were age 13–65 years old, 9 % <13 years old, and 12 % >65 years. Forty percent had co-morbidities. Six percent had acute ethanol exposure. Bites were from 61 rattlesnakes, 22 copperheads, 2 cottonmouths, and 10 unknown crotalids. Forty-five percent were upper extremity and 55 % lower extremity bites. Ninety-three percent demonstrated swelling and 35 % erythema, 9 % received prophylactic or empiric antibiotics. Thirty-nine percent had hemotoxicity, 4 had minor early bleeding. Fifteen percent had bullae or necrosis. Five percent had neurotoxicity. Six patients had a tourniquet placed. Eighty-four percent received antivenom. Six patients received prophylaxis against antivenom reaction. Seven (9 %) adverse reactions to antivenom were reported. Six procedures were performed, including four wound debridements and two fasciotomies. Thirty-nine percent of the patients had at least one set of follow-up labs. One patient was readmitted 2 days post-bite for worsening thrombocytopenia and bleeding. Three additional patients were admitted 4–7 days post-bite, all with late thrombocytopenia and two with complete defibrination. One was admitted a third time 15 days post-bite for a second thrombocytopenia recurrence.

Discussion: These data provide a nationally representative sample of snakebite victims seen at the bedside by medical toxicologists. The registry provides a unique opportunity to study

numerous aspects of snake envenomation, including at-risk populations, rare effects, unusual treatments, and relationship between patient factors, severity, and outcomes.

Conclusion: The NASBR is a powerful tool for gathering and studying a vast amount of information related to snakebite.

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