4. The Epidemiologic and Clinical Characteristics of Snakebites in the North American Snakebite Registry

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Background: ACMT established the North American Snakebite Registry (NASBR) in 2013 to enhance knowledge of snake envenomation in humans.

Research Question: What are the epidemiologic and clinical characteristics of snakebites in the NASBR?

Methods: All cases prospectively reported to the NASBR between 1/ 2013 and 12/2015 were reviewed. Descriptive statistics were used.

Results: Fourteen sites from 10 states contributed 450 cases. Ninety- nine percent were due to native species and >99% of these pit vipers. Rattlesnakes accounted for 58%, copperheads 29%, cotton-mouths 3%, and unidentified pit vipers 9%. Sixty-nine percent of bites occurred in men and 42% in children ≤18 years. Lower extremities were affected in 54%, but the most common site was a finger (32%). Intentional interactions led to 19% of bites. Native pit viper-related (*n* = 442) local tissue effects included swelling in 96%, ecchymosis in 62%, and erythema in 39%. Systemic effects were vomiting (before opioids) in 7.2%, minor bleeding in 6.3%, and neurotoxicity in 5.2%. Hypotension occurred in 15 patients (3.4%) and 2 were intubated. Hematologic effects included thrombocytopenia (10.6%), hypofibrinogenemia (11.8%), and coagulopathy (14.0%). Treatment included CroFab® antivenom in 84.7% of patients with a pit viper bite. Maintenance doses were used in 30.3% of these. ≥1 dose of antibiotics was given to 34 patients (7.7%), with 2 reported confirmed infections. Debridement of bullae accounted for 69% of procedures. There were 6 fasciotomies, with 2 having elevated intracompartmental pressure documented. Length of stay was <48 h in 78.3%. Fourteen patients were readmitted after discharge, with 8 reporting late hematologic toxicity (1 with late bleeding). Six were retreated with antivenom. See Tables for more details.

Discussion: The NASBR is a national registry of detailed case information regarding snakebite. Four hundred fifty cases were amassed in 3 years. General demographics were similar to those reported in national poison and injury databases. However, more detailed and informative