

Presented at the ACMT Annual Scientific Meeting 2023 – San Diego, CA

Published in J Med Toxicol 2023;19(2):153-154.

190. Pediatric Loxoscelism: A Review of Brown Recluse Bites in the Toxicology Investigators Consortium (ToxIC)

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Background: The brown recluse spider (*Loxosceles reclusa*) is one of the few medically relevant spiders envenomations in North America. Local effects can include necrosis and blistering, while systemic effects can include fevers, rash, transaminase elevation, and hemolysis. For unclear reasons, systemic loxoscelism is more commonly reported in pediatric patients than adults. No antivenin is currently approved in the US, and data to support pharmacologic therapies are limited.

Methods: This is a retrospective review of the Toxicology Investigators Consortium (ToxIC) registry from January 2010-September 2022 including all patients 0-18 years of age seen at the bedside by a medical toxicologist and determined to have loxosceles envenomation. Statistics are descriptive.

Results: 192 cases were analyzed with an average age of 10.8 years. Dermatologic manifestations were common with 129/192 (67%) patients experiencing rash, 76/192 (40%) experiencing necrosis, and 66/192 (34%) experiencing blistering. Hemolysis occurred in 60/192 (31%) envenomations, with 29/60 (48%) receiving steroids and 24/60 (40%) requiring transfusion. Of 124 patients with known race data, 20/37 (54%) of Black/African patients experienced hemolysis versus 17/87 (20%) from other race categories. Fourteen (38%) Black/African patients experienced rash versus 11/87 (13%) from other race categories. Other hematologic abnormalities were uncommon. Common medications administered to patients included steroids (48/192) and opioids (20/192). Only one death occurred.

Discussion: Our data indicates that with appropriate supportive care, death from brown recluse envenomation is uncommon. The most common manifestations are dermatologic and hemolytic, and the most common treatments are steroids and blood transfusion. Interestingly, our data support anecdotal evidence that patients of Black/African descent have more severe responses to envenomation.

Conclusion: Rash and hemolysis are common manifestations of loxoscelism and toxicologists typically treat these with transfusions and/or steroids. Patients of Black/African descent may have more severe courses, and further research is required to determine why.