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191. Adult 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 few medically relevant spiders in North America. Envenomations can result in local and systemic symptoms. Signs and symptoms of loxoscelism can include local effects such as necrosis and blistering, while systemic effects can include fevers, rash, transaminase elevation, and hemolysis. 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 that included patients 19 years of age or older seen at the bedside by a medical toxicologist and determined to have a brown recluse envenomation. Statistics are descriptive.

Results: Twenty-six cases were analyzed with an average age of 40.5 years. Dermatologic manifestations were common, with 14 (54%) patients experiencing a rash, 14 (58%) experiencing necrosis, and five (23%) experiencing blistering. Five (19%) envenomations resulted in hemolysis. Of these patients, one received steroids and one required transfusion. Of the 18 patients with known race data, 3/6 (50%) Black/African patients experienced hemolysis versus 1/12 (8%) patients with any other race documented. Rash was documented for 3/6 (50%) Black/African patients compared to 1/12 (8%) from other races. Other hematologic abnormalities were uncommon with one patient experiencing thrombocytopenia, and two patients with significant leukocytosis.

Discussion: Our data indicates that severe loxoscelism in adults is uncommon. The most common manifestations are dermatologic and hemolytic, with patients recovering after supportive care. Interestingly, our limited data supports anecdotal evidence that patients of Black/African descent have more severe responses to loxoscelism than other races, though reasoning is unclear.

Conclusion: Rash and hemolysis are common manifestations of loxoscelism. Adult patients rarely have severe envenomations. Patients of Black/African descent may have a more severe course, and further research is required to determine why.