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188. Latrodectus Envenomations in Adult Patients: A Review of the Toxicology Investigators Consortium (ToxIC)

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Background: North America has five medically relevant spider species from the genus *Latrodectus*, commonly known as widow spiders. Widow spider venom is complex and contains a variety of neurotoxins. Signs and symptoms of envenomation range from localized pain to severe systemic symptoms, including vital sign abnormalities, muscle cramps, vomiting, and in rare cases respiratory distress and myocardial infarction. While an antivenin exists, care is typically supportive and data for pharmacological therapies is limited.

Methods: This is a retrospective review of the Toxicology Investigators Consortium (ToxIC) registry from January 2010 to September 2022 including all patients 19 years of age or older seen at bedside by a medical toxicologist and determined to have widow spider envenomation. Statistics are descriptive.

Results: A total of 48 cases were reported. Vital sign abnormalities were uncommon with five patients (10%) experiencing hypertension (SBP>200 mmHg) and 5 experiencing tachycardia (HR>140). No other cardiovascular effects were reported. Neurological disturbances were most common with 11/48 (23%) patients experiencing symptoms. The most common nervous system effects were paresthesias (5/48, 10%) and agitation (3/48, 6%). Dermatologic complications were relatively common with 11/48 (23%) of patients experiencing rash. Two patients (4.2%) experienced ARDS/asthma symptoms. Opioids were the most common class of medication given with 22/48 (46%) patients receiving them, followed by benzodiazepines in 19/48 (40%) patients. Antivenin was given in 11/48 (23%) patients. No deaths occurred.

Discussion: In this retrospective review, we found that the most common symptoms of widow envenomation in adults were pain, indicated by opioid administration in 46% of cases, followed by rash and neurological disturbances. Less than 25% of patients required antivenin administration. No deaths were reported, indicating that supportive care is adequate in most cases.

Conclusion: While symptoms can be severe, most cases of *Latrodectus* envenomation can be managed with supportive care.