Clinical presentation and Treatment of Black Widow Spider Envenomation: A review of 163 Case. July 1992 21:7 Annals of Emergency Medicine

Into: Black widow spiders (Latrodectus species) produce one of the most potent spider veomns by volume. Black widows are present in every US state save Alaska. Latrodectus specises are the leading cause of death from arachnoid envenomation in the US, most often at the extremes of age. The venom is a neurotoxin with its action in the neuromuscular junction by binding to glycoproteins or angliosides in the presynaptic membrane and opening cation channels, releasing and inhibiting reuptake of achetylcholine. This causes muscular skeletal pain and cramping, nausea, diaphoresis and hypertension. In minor cases, it is only in the envemonated limb, in more severe cases, symptoms spread to chest and abdomen. The symptoms often follow a waxing and waning course and can last for 24-48 hours.

Methods: Consecutive Case Series over 8 years (1982-1990) presenting or transferred to Good Samaritan Regional Medical Center in Phoenix Arizona. 172 Consecutives ceases meeting inclusion: positive black widow spider identification or visible envenomation site “target lesion”

Results: 48% of patients were bitten in upper extremity, 28% in lower extremity, 18% in trunk and 5% in the head/neck. Average time from envenomation to symptoms was 1.15 +/- 1.64 hours. Most had normal vitals, but 45 (31%) were hypertensive (only 6 had history of HTN), 10% of patients had tachycardia. Common symptoms were generalized abdominal or back pain (50%), local or extremity pain (38%), followed by hypertension (29%) and diaphoresis (22%). Patients were generally treated with IV opioids for pain control, benzodiazapenes for muscle relaxation. The old treatment of calcium gluconate was found to be ineffective. 58 patients received antivenim and all had resolution of their symptoms in 31+/- 26.7 minutes. One patient suffered fatal anaphylaxis due to the antivenom. Over 50% of patients without antivenim required admission while only 12% of patients given antivenom required admission. Patients without antivenom had remitting relapsing pain and patients given antivenom were observed for urticarial reactions. One patient was admitted for chest pain with non-specific st-t wave changes and ruled out for ACS. There were no fatalities aside from the anaphylaxis in this series.