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CAT Block 4

**Reference:**
"Randomized Controlled Trial of Intravenous Antivenom versus Placebo for Latrodectism: The Second Redback Antivenom Evaluation (RAVE II) Study"
Ann Emerg Med. 2014 Dec;64(6):620-628

**Clinical Question:**
Does latrodectism antivenom after a spider bite improve clinical outcome?

**Introduction:**
Latrodectism is the most important spider envenomation syndrome worldwide. To date, there is limited evidence of the efficacy of antivenom treatments. The redback widow venom causes severe pain, but is rarely fatal with limited systemic effects. In the US, this treatment has not been accepted secondary to the perception of possible lethality. In Australia, the treatment has been used for over 60 years. Is this treatment effective and safe? These investigators sought to find the answer.

**Methods:** Multicenter placebo-controlled trial: 224 patients (> 7yo) with redback spider bite and severe pain, ± systemic effects. The primary outcome was a significant reduction in pain at 2 hrs. Another primary outcome for those with systemic features was resolution at 2 hours. Secondary outcome were improved pain at 4 and 24h, resolution of systemic features at 4h, opioid administration, and adverse reactions.

**Results:**
Two hours after treatment, 26 of 112 patients (23%) from the placebo arm had a clinically significant improvement in pain versus 38 of 112 (34%) from the antivenom arm (difference in favor of antivenom 10.7%; 95% confidence interval 1.1% to 22.6%; $p = 0.10$). Systemic effects resolved after 2 hours in 9 of 41 patients (22%) in the placebo arm and 9 of 35 (26%) in the antivenom arm (difference 3.8%; 95% confidence interval 15% to 23%; $p = 0.79$). There was no significant difference in any secondary outcome between antivenom and placebo. Acute systemic hypersensitivity reactions occurred in 4 of 112 patients (3.6%) receiving antivenom.

**Conclusion:**
There is not a statistically significant difference in primary or secondary outcomes in patients receiving latrodectism antivenom, with the potential to cause harm regarding hypersensitivity reactions. Although there was a small clinically significant improvement in pain at 2 h, the remainder of outcomes had no differences. For a potentially expensive therapy, this does not seem an effective treatment regarding the results of this study.