



# Venomous Visitors: A Case Report of Scorpion Envenomation in Rural Arizona



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## Background

- Of the many scorpion species native to the United States, only the Arizona bark scorpion (*Centruroides sculpturatus*) has venom potent enough to cause significant medical issues.
- These scorpions are endemic to southeastern California, Arizona, Nevada, southern Utah and southwestern New Mexico.
- Most individuals stung by scorpions experience only localized pain, but some may develop paresthesias, neuromuscular symptoms, autonomic disturbances, and cranial nerve

### Grades of Scorpion Envenomation

<b>Grade 1</b>	Local pain and/or paresthesias at site of envenomation
<b>Grade 2</b>	Pain and/or paresthesias remote from the site of the sting, in addition to local findings
<b>Grade 3</b>	Either cranial nerve/autonomic dysfunction <b>or</b> somatic skeletal neuromuscular dysfunction
<b>Grade 4</b>	Combined cranial nerve/autonomic dysfunction <b>and</b> somatic skeletal neuromuscular dysfunction

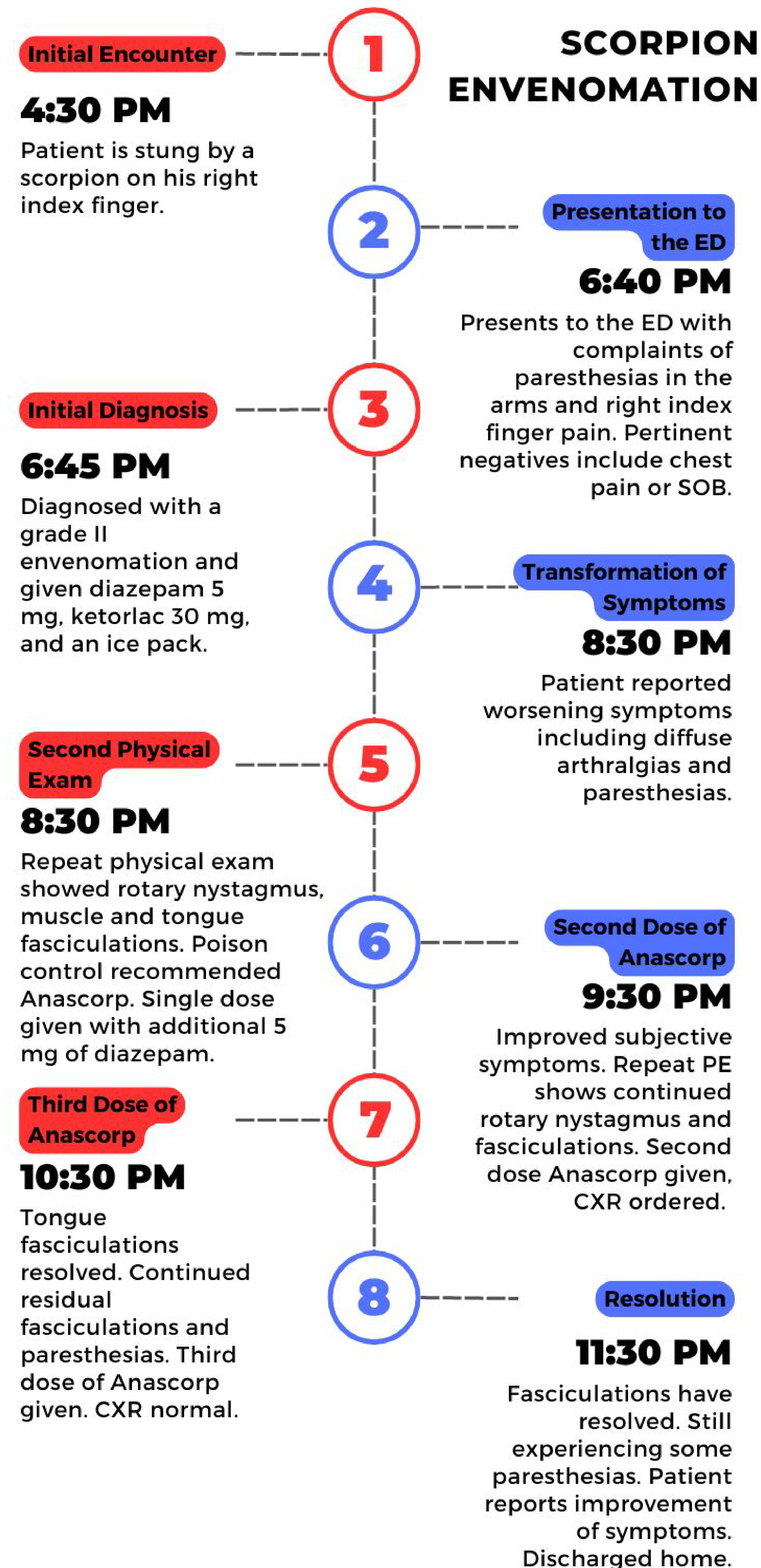
\* adopted from EM WIKI

- Centruroides scorpion envenomation is categorized into four grades, with Grade IV being the most severe. This report details a case of Grade IV envenomation in rural Arizona.

## Case Description

- 71-year-old male current smoker with a PMH of HTN who presented to the ED with complaints of finger pain and numbness after being stung by a scorpion earlier that afternoon while cleaning his barn. The patient was initially diagnosed with a grade 2 scorpion envenomation. Pt was treated with diazepam, ketorolac, and an ice pack. Hours later he developed muscle fasciculations, rotary nystagmus, tongue fasciculations and was visibly anxious. Poison control was contacted, who recommended treatment with Anascorp. Pt was then treated with 3 doses of Anascorp and an additional dose of diazepam. Pt symptoms improved and the patient was discharged home.

## TIMELINE



## Discussion

- Treatment of Scorpion Envenomation:**
  - Supportive care, including general pain control, ice pack application, and benzodiazepines, is typically sufficient for treating scorpion envenomation (Grade 1 and 2)
  - In severe cases (Grade 3 and 4) Anascorp should be administered promptly to patients with symptoms such as respiratory distress, hypercholinergic syndrome, or neuromuscular dysfunction.
- FDA recommends initial dosing as 3 vials of Anascorp (scorpion antivenom) followed by additional dosing as needed until symptom resolution.
- Due to cost and patient stability we opted to give one dose of Anascorp at a time and reassessed each hour for additional dosing.
- This case highlights the importance of monitoring patients with scorpion stings, as initial presentations can progress to more severe grades of envenomation, which was seen in this case.

## Conclusion

- The clinical progression of scorpion envenomation can unfold over several hours, making interval assessments crucial for detecting changes and neurotoxic effects during treatment.
- Emergency departments may want to have Anascorp in stock in endemic areas such as Southern Arizona.
- Clinicians should be informed about the indications and potential adverse effects of Anascorp administration and should consult Poison Control as needed.

## References

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