

Rattlesnake Bites

Southern California has several types of rattlesnakes.

Rattlesnake bites cause damage by destroying the tissue at the bite site and causing blood-clotting problems. The Mojave rattlesnake is different from other California rattlesnakes in its venom affects the nervous system and can lead to paralysis.

CroFab™ (Crotalidae Polyvalent Immune Fab-Ovine) Antivenin (AV) is an immunoglobulin approved for the treatment of North American Rattlesnakes, which are most of California rattlesnakes.

Patient Management

- 1. Contact California Poison Control:**
 - a. 1-800-876-4766 or San Diego Division: 858-715-6378**
- 2. What you Should Not Do:**
 - a. Do not apply a tourniquet – can block circulation**
 - b. Do not apply ice – can block circulation**
 - c. Do not cut the wound with a knife or razor – can cause excess bleeding**
 - d. Do not use your mouth to suck out venom – human mouths have bacteria causing infection**
 - e. Do not apply electric shock – can cause cardiac arrhythmias, burn and additional pain**
- 3. What you Should Do:**
 - a. Support airway and breathing**
 - b. Gently wash area**
 - c. Can apply cold compress (not ice)**
 - d. Remove rings and jewelry**
 - e. Mark the leading edge of swelling and tenderness with the time distal and proximal to the bite**
 - f. Measure the circumference of extremity distal and proximal to the bite**
 - g. Intravenous fluid boluses!**
 - h. Consider antivenom (CroFab™)**
- 4. If there is any swelling or bleeding present: administer 4 – 6 vials of CroFab (Crotalidae Polyvalent Immune Fab-Ovine) Antivenin (AV) diluted in 250 ml normal saline (100ml for younger patients) infused over 60 minutes**
 - a. If there is severe envenomation, defined as rapidly progressing swelling, or platelets <25,000 or fibrinogen <25 or the patient is hypotensive or has airway compromise: administer 6 vials in 250 ml normal saline (100ml for younger patients) infused over 60 minutes**
 - b. Add Note: you can use normal saline instead of sterile water to reconstitute CroFab for the younger patient**
- 5. Order baseline CBC with platelets, fibrinogen levels, PT/PTT, and bleeding time (other labs if indicated). Redraw after each hour of Antivenin infusion**

6. Mark area of swelling and tenderness with pen and note time distal and proximal to bite. Observe patient for continued progression of swelling. Check flexion/extension of wrist or ankle on the side of the envenomation for muscle loss. Assess for circulation and Compartment Syndrome! Any swelling: Admit to PICU!
7. If swelling is progressing, or platelets < 100,000, or fibrinogen <100: Repeat 4 vials CroFab AV every hour until patient is stable; defined as having no further progression of swelling, platelets and fibrinogen trending back toward normal, and no other "severe" manifestations of envenomation
 - a. If "severe parameters" are present, administer another 6 vials Antivenin. Repeat every hour as needed
 - b. "Severe" is defined in 4a
8. At the time stability is reached, recommended recheck of CBC with platelets, fibrinogen, PT/PTT, and bleeding time every 6 hours after the end of the last Antivenin infusion
9. If return of swelling progression is noted, or platelets or fibrinogen again begin to fall: administer 2 vials Antivenin reconstituted in 250 ml NS (100ml for younger patients) infused over 60 minutes. Continue to recheck labs every 6 hours
10. Patients can be medically cleared and discharged 24 hours after last infusion of Antivenom
11. All patients are requested to return for recheck of CBC with platelets, fibrinogen level, PT/PTT, and bleeding time 48 hours after last dose of Antivenin
12. If swelling is again progressing, platelets <50,000, or fibrinogen <50, recommend administration of 2 vials Antivenin diluted in 250 ml NS (100ml for younger patients) infused over 60 minutes. Recheck CBC with platelets and fibrinogen 1 hour after infusion. Discharge patient unless bleeding or other life-threatening problem present (even if labs do not return to "stable" levels)
13. If any laboratory or clinical abnormality exists at the first 48 hour follow up, have patient return again in 48 hours for second recheck of CBC with platelets, fibrinogen, PT/PTT and bleeding time