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Crotaline Fab Antivenom for the Treatment of Pediatric Rattlesnake Envenomation

Offerman SR, Bush SP, Moynihan JA, Clark RF

Objective: Pediatric cases comprise approximately 22% of rattlesnake envenomations in the U.S. The recent introduction of Crotaline Fab antivenom and withdrawal from the market of the traditional antivenom preparation has changed the way rattlesnake envenomation is treated. Although in some hospitals Crotaline Fab antivenom may be the only antivenom currently available, there is little data regarding its use in children. Our objective is to provide the first data regarding safety and effectiveness of this new drug in the pediatric population.

Methods: Data was collected prospectively and retrospectively for all pediatric rattlesnake envenomations treated at two urban hospitals during the year 2001. Cases were included if there were signs of envenomation at presentation, patient age 13 years or less, and administration of Crotaline Fab antivenom. Cases were excluded if Antivenin Crotalidae Polyvalent was given. Primary outcome variables were snakebite severity scores throughout the course of therapy, number of vials of Crotaline Fab antivenom given, occurrence of allergic reactions, need for surgical therapy, and the presence of permanent sequelae or serum sickness identified at telephone follow-up.

Results: In the 12 study cases, age ranged from 14 months to 13 years. (mean=6.9, sd=4.2) Presentation snakebite severity scores ranged from 2 to 9. (mean=5.3, sd=2.3) Total Crotaline Fab antivenom doses ranged from 4 to 22 vials. (mean=12.7, sd=5.4) Initial control of symptoms was achieved with 4-16 vials (mean=7.7, sd=3.7) and severity scores stabilized or improved within 24 hours in all patients. Recurrence of local swelling occurred in one case despite scheduled doses of antivenom. No cases required surgical intervention and no permanent sequelae were identified. No immediate or delayed hypersensitivity reactions occurred.

Conclusion: In this group of pediatric patients treated for rattlesnake envenomation, Crotaline Fab antivenom was safe and appeared to be effective.