

Scorpion antivenom results in prompt recovery from nerve poisoning

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Youngsters suffering severe nerve poisoning following a scorpion sting recover completely and quickly if a scorpion-specific antivenom is administered, according to a study conducted by researchers from The University of Arizona and reported in the May 14 issue of *The New England Journal of Medicine*.

The article, "Antivenom for Critically Ill Children with Neurotoxicity from [Scorpion](#) Stings," recounts a study of 15 children conducted in Tucson, Ariz., during 2004 and 2005. All of the children had been admitted to a pediatric intensive care unit following a scorpion sting and were experiencing abnormal eye movements, uncontrolled thrashing of limbs and respiratory distress, all symptoms of nerve poisoning caused by the venom of the bark scorpion.

The principal investigator of the study and lead author of the article is Leslie Boyer, MD, director of the VIPER (Venom Immunochemistry, Pharmacology and Emergency Response) Institute at The University of Arizona College of Medicine and medical director of the Arizona Poison and Drug Information Center at the UA College of Pharmacy.

In the study, eight of the children, most of whom were under 6 years, received a scorpion antivenom that is commercially available in Mexico but is considered an investigational drug in the United States and is not approved for general use by the U.S. Food and Drug Administration. The seven other study participants received a placebo (a preparation containing no medication).

The symptoms of nerve poisoning were resolved in all of the children treated with the antivenom in less than four hours, and usually within two hours. The children who received the placebo continued to experience nerve poisoning for four hours or more and required large doses of sedative medication and extended hospitalization.

"This study told us that the dangerous effects of bark scorpion venom can be reversed quickly with the right antivenom," Dr. Boyer says. "One hundred percent of the [children](#) who received it got better very quickly, meaning that using this antivenom in the emergency room will make intensive care treatment unnecessary for most patients. This is particularly important in small Arizona towns without pediatric intensive care units. By avoiding helicopter trips and [intensive care](#) stays, we can save lives and keep treatment costs down at the same time."

Andreas Theodorou, MD, a professor of pediatrics and chief medical officer of University Medical Center in Tucson, was part of the study team.

"This antivenom basically takes symptoms away in a very short time," Dr. Theodorou says. "What was a life-threatening disease that would put kids in the pediatric ICU has become, for most of them, an outpatient disease."

Source: University of Arizona, College of Pharmacy

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