

## Antivenoms administered properly and swiftly save lives

### To the editor:

Stu Hutson's report<sup>1</sup> on antivenoms contained a comment that anti-venom, or antsnake venom (ASV), can cause more damage to the patient than the venom itself. This widespread attitude exacerbates the snake bite problem in developing countries, delaying or inhibiting medical personnel from rapidly delivering ASV to patients who need it.

The only effective treatment for snake envenomation is ASV, and the sooner it is administered after a bite, the more likely the victim will have a favorable outcome. Adverse anaphylactic reactions to ASV are a problem; they can occur in more than 20% of the patients treated with ASV. However, adverse reactions are manageable and easily solved; this fact is virtually always absent from the ASV criticism. Treating reactions to ASV, with 0.5 mg of adrenaline diluted 1:1,000 and delivered intramuscularly at the first sign of a reaction, is simple, inexpensive and life saving.

Snake envenomation debilitates and kills the rural poor in large numbers. Global estimates range from 0.4 to 1.8 million envenomations per year, with 20,000 to 100,000 estimated annual deaths. The stochastic nature of snake bites has allowed folk remedies to persist as effective treatments in the minds of many for centuries, and the belief that ASV is more dangerous than venom has undoubtedly contributed to unnecessary morbidity and mortality, as well as to the continued use of useless folk remedies.

Ian Simpson has extensively dealt with the adverse reactions to ASV in his snake bite protocol for Asia and Africa<sup>2</sup>. Early administration of

adrenaline eliminates severe reactions and costs about \$1. Basic anti-venom technology has been known since the late nineteenth century, and, given that more than a century has passed, it should be better understood and accepted by not only the medical community but also the general public. The dismal situation regarding antivenom production and its use, as well as the global snakebite problem, are summarized in my recent book, which explores the use of snakes in various cultures as well as their unique role in the web of life<sup>3</sup>.

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### COMPETING FINANCIAL INTERESTS

The author declares no competing financial interests.

1. Hutson, S. *Nat. Med.* **16**, 615 (2010).
2. Pakistan Medical Research Council. *Snakebite Management in Asia & Africa*. <<http://www.pmmc.org.pk/A2%20Snakebite%20Managementin%20Asia%20and%20Africa.pdf>> (accessed 11 June 2010).
3. Murphy, J.C. *Secrets of the Snake Charmer, Snakes in the 21st Century*. (iUniverse, Bloomington, Indiana, 2010).

*Editor's note: When Scott Pfaff of the Riverbanks Zoo and Garden in Columbia, South Carolina was quoted in the story about antivenoms, he was explaining why these medicines should only be administered by trained medical professionals. He emphasizes that the use of antivenoms by trained medical professionals "is not only safe, but the only effective treatment for snakebite envenomation."*