

## **Current use of Australian snake antivenoms and frequency of adverse reactions.**

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**Objective:** To investigate current use of Australian snake antivenoms and the frequency and severity of immediate-type hypersensitivity reactions. **Methods:** This was a nested prospective cohort study of patients receiving snake antivenom treated in Australian hospitals from January 2002 to August 2007 as part of the Australian Snakebite Project - ASP. The outcomes were use of antivenom, frequency and severity of hypersensitivity reactions to antivenom and treatment of these reactions.

**Results:** One hundred and sixty nine patients received snake antivenom. The commonest reason for antivenom administration was venom induced consumption coagulopathy in 123 cases(73%), followed by non-specific systemic effects(14%), neurotoxicity(5%) and myotoxicity(4%). In eight patients(5%) antivenom was given in non-envenomed patients. The commonest antivenoms used were brown snake(46%), tiger snake(31%) and polyvalent(12%). The median dose was 4 vials (IQR:2-5vials) and 20 patients received two different types of antivenom. Hypersensitivity reactions occurred in 43 cases(25%);19 satisfied our definition of anaphylaxis, of which 10 were moderate and 9 were severe including 8 that were hypotensive (systolic BP<90mmHg). The remaining 24 reactions were mild (skin only). Adrenaline was used for treatment in 25 cases. The reaction rate was higher for tiger snake(42%) and polyvalent(45%) antivenoms than for brown snake antivenom(10%). Hypersensitivity reactions occurred in 9 of 32(31%) patients receiving any form of premedication versus 16 of 62(26%) not receiving premedication. **Conclusions:** Antivenom was used appropriately in most cases with coagulopathy being the commonest indication. Hypersensitivity reactions were common, however more than half were only mild. The discretionary use of premedication was not associated with any reduction in reaction risk.