



A Stinging Experience

Karen Binkley, MD, FRCPC

Ken, 45, enjoys camping and fishing expeditions. While working in his yard, he is stung by an insect he believes to be a yellow jacket. There is immediate redness, swelling, and pain at the site of the sting. Within minutes, Ken begins to feel lightheaded and dizzy. He then develops diffuse urticaria, chest tightness, and wheezing. His wife calls 9-1-1.

By the time the ambulance arrives, Ken is semi-conscious (Table 1).

He is given intramuscular adrenaline and intravenous antihistamine and transported to hospital, where he receives two additional doses of adrenaline, as well as intravenous corticosteroids.

He is observed for eight hours and sent home with a prescription for an EpiPen®. Past history is remarkable for peptic ulcer disease, mild hypertension, and hyperlipidemia.

His current medications include simvastatin and atenolol. He has no known drug allergies, is not atopic, and is otherwise well. His physical exam is unremarkable.

Table 1

A rundown on Ken

- Blood pressure: 60/20 mmHg
- Pulse: 140 beats/minute
- Respiratory rate: 14 breaths/minute
- Diffuse urticaria
- Facial swelling
- Wheezing audible

Further management should include:

- a) Referral to an allergist for testing and consideration of venom immunotherapy
- b) Discontinuation of beta blocker with an alternate antihypertensive agent added
- c) Instructions for a medical identification bracelet
- d) All of the above

Answer: All of the above

This patient has had a systemic allergic reaction after an insect sting and should be referred to an allergy specialist for venom skin testing with a view to venom immunotherapy. Venom immunotherapy is approximately 98% effective in preventing future systemic allergic reactions from subsequent stings.

Beta blockers should be discontinued in this patient. Beta blockers interfere with the action of epinephrine and there is good evidence to sug-

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gest that individuals who experience anaphylaxis while on a beta blocker are more difficult to resuscitate and less likely to survive.

Although the literature is less extensive, there is at least some evidence to suggest that individuals on angiotensin-converting enzyme (ACE) inhibitors who experience anaphylaxis may also be more difficult to resuscitate. This is thought to relate to the fact that ACE inhibitors interfere with the breakdown of kinins and bradykinins. Since there is increased production of kinins during an allergic reaction, when they are not broken down, they persist in the circulation longer and contribute to hypotension and angioedema.

In this patient, atenolol is discontinued and he is started on hydrochlorothiazide, with good blood pressure control. He is also referred to an allergy specialist.

Skin testing is positive to yellow jacket and venom immunotherapy is instituted.

Dr. Binkley is an assistant professor of medicine, division of clinical immunology and allergy, University of Toronto, and a staff member, St. Michael's Hospital and Sunnybrook and Women's Health Sciences Centre, Toronto, Ontario.

The patient continues to carry autoinjectable adrenalin at all times. Since it is anticipated that he will be some distance from medical care, he generally takes two to three EpiPens with him while camping. He also obtains a medical identification bracelet outlining his condition. **Dx**