

Knowledge about using auto-injectable adrenaline: review of patients' case notes and interviews with general practitioners

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In the United Kingdom, the rising incidence of anaphylaxis is of concern. Affected patients should avoid exposure to allergens; after inadvertent exposure, symptoms can be treated with emergency packs, which include adrenaline. In our clinic, we often prescribe preloaded devices for auto-injecting adult or paediatric doses of adrenaline. Because referred patients' (or their parents') knowledge about using these devices was poor at the first visit to the clinic, we assessed the knowledge of local general practitioners.

Participants, methods, and results

Patients (or their parents) prescribed injectable adrenaline are routinely evaluated at the first hospital assessment about their knowledge of how and when auto-injecting devices should be used. We reviewed these evaluations in 60 patients referred after a diagnosis of anaphylaxis in primary care and seen in the allergy clinics at three hospitals in south west London. Of these 60 patients, 14 were adults issued with an auto-injecting device by their general practitioner, and the remaining 46 were children younger than 8 years. Two of the 14 adults (14%) and the parents of only 16 of the 46 children (35%) knew when and how to use injectable adrenaline. Overall, fewer than a third of patients or parents of affected children had adequate knowledge of the indications and how to use the device.

Separately, we interviewed 50 local general practitioners, who were attending postgraduate training sessions, about their understanding of when and how injectable adrenaline should be used. All participated, and all had prescribed auto-injecting devices. We asked them to show how to use an unloaded training device. Only one knew, because of a personal history of anaphylaxis. None of the general practitioners personally showed patients how or when to use an auto-injector. A total of 40 general practitioners said that they asked the practice nurse to provide this information, indicating that a fifth made no provision for training the patient. All general practitioners appreciated that auto-injecting devices should be used in situations of serious faintness or hypotension, choking, or bronchospasm. Most (26), however, did not think that immediately going to hospital is necessary after taking adrenaline for anaphylaxis.

Comment

Patients and general practitioners lack knowledge of how and when to use devices for auto-injecting adrenaline despite the latter prescribing them. Although many local general practitioners indicated that a practice nurse trained patients and patients' parents, this has not translated into an acceptable

proportion of patients or their carers having sufficient knowledge about using injectable adrenaline. Of greater concern, a large proportion of these general practitioners would not advise patients who had injected adrenaline to go to hospital; this is in contrast to recommended practice.¹ This lack of knowledge by prescribers mirrors that of previous studies.^{2 3}

Current provision in the United Kingdom for patients with allergies is poor, and patients may have to wait between diagnosis of anaphylaxis and assessment by a specialist. Prescribers of devices for auto-injecting adrenaline should therefore ensure that patients and parents are properly educated.

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Ethical approval: Not needed.

1 Project team of the Resuscitation Council (UK). Update on the emergency medical treatment of anaphylactic reactions for first medical responders and for community nurses. *Resuscitation* 2001;48:241-3.

2 Davies H. Patients should be taught how to inject adrenaline. *BMJ* 1996;312:638.

3 Sicherer SH, Forman JA, Noone SA. Use assessment of self-administered epinephrine among food-allergic children and pediatricians. *Pediatrics* 2000;105:359-92.

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Q&A

Wrinkly skin

Question

How does one explain the wrinkling of the skin of the hands and feet caused by prolonged immersion in water?

Daniel Weiler, *Haifa, Israel*

Answer

An answer I found from a dermatology site on the web: The wrinkling that develops after a hand or foot is immersed in water for a prolonged period results from the skin increasing its surface area to accommodate the water it absorbs. From most pathology manuals: skin maceration, or washerwoman's skin, which is swelling and wrinkling of the skin due to water absorption.

Peter Hayes, *Tamworth, Australia*

http://bmj.com/cgi/qa-display/short/bmj_el;38004

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