

PostScript

LETTERS

New recommendation for N-acetylcysteine dosing may reduce incidence of adverse effects

National Poisons Information Service (NPIS) guidelines for the treatment of paracetamol overdose recommend the use of intravenous N-acetylcysteine (NAC) in a dose calculated according to body weight (kg). Available on Toxbase (<http://www.spib.axl.co.uk>). We recently treated a 180 kg patient who had overdosed on paracetamol, prompting us to question this guidance.

Paracetamol overdose is the most common method of deliberate self-poisoning in the UK.¹ NAC is the well established antidote for the treatment of potentially harmful paracetamol overdose. It acts by providing an exogenous source of glutathione to conjugate the hepatotoxic metabolite, n-acetyl-p-benzoquinoneimine, of paracetamol. NAC is water soluble and is distributed within the vascular compartment. The dose recommended by the NPIS is calculated according to body weight. This method of estimating a person's plasma volume becomes inaccurate in obese patients as the increase in body mass is not reflected by a similar increase in plasma volume.

NAC is known to cause adverse effects in up to 10% of patients, including anaphylactoid reactions such as hypotension, tachycardia, bronchospasm and respiratory distress.² Accidental overdose of NAC has been fatal² and it is likely that anaphylactoid reactions to NAC are dose-related. NAC has been shown to produce dose-related vasodilatation of human subcutaneous arterioles at the same concentrations that produce anaphylactoid reactions.³ It would, therefore, be of benefit to reduce an individual's dose if the therapeutic effect could be maintained.

Following communication with the NPIS, via our hospital drug information service, a ceiling weight of 110 kg has now been recommended in the NPIS guidelines for calculating NAC dose in paracetamol overdose. This was published on Toxbase on 27 June 2005. We hope this reduces the incidence of adverse reactions when managing paracetamol overdose in obese patients.

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RD made the initial query and wrote the letter. GC made the formal enquiries leading to the change in guidelines. BP has edited the letter and acts as guarantor.

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References

- 1 Sheen CL, Dillon JF, Bateman DN, *et al*. Paracetamol toxicity: epidemiology, prevention and costs to the health-care system. *Q J Med* 2002;95:609-19.
- 2 Flanagan RJ, Meredith TJ. Use of N-acetylcysteine in clinical toxicology. *Am J Med* 1991;91:131-9.

3 Sunman W, Hughes AD, Sever PS. Anaphylactoid response to IV acetylcysteine. *Lancet* 1992;339:1231-2.

Green fingers, red eyes! Ocular hazards of gardening

A 69 year old female presented with red, painful eyes and blurred vision. She had been pruning an euphorbia plant. Vision was reduced in the right eye (6/18) and normal in the left. There was bilateral conjunctival injection with the right eye having a hazy cornea, large corneal epithelial defect, and fibrinous uveitis.

Copious irrigation was carried out and the ophthalmology department was consulted. The patient fully recovered after treatment with intensive dexamethasone to the right eye and chloramphenicol drops to both eyes.

Euphorbia is a relatively common ornamental garden plant. It is traditionally used as a remedy for warts, calluses, and verrucas, but it causes a spectrum of inflammation on exposure to the eyes. In severe cases, corneal ulceration and blindness can result. All gardeners should be aware of the hazards of this plant and wear protective goggles. All emergency departments should be alerted to the potential dangers and act expediently to prevent irreversible loss of vision.

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Written consent has been obtained from the patient to publish this image.

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Reference

- 1 Eke T, Al-Husainy S, Raynor MK. The spectrum of ocular inflammation caused by euphorbia plant sap. *Arch Ophthalmol* 2000;118:13-6.

Use of intravenous cyclizine in cardiac chest pain

May and Kumar¹ conclude that "cyclizine should be avoided in patients with acute coronary events", although we note that the BETs online version states "there appears to be no firm evidence that cyclizine increases morbidity and mortality in patients with myocardial ischaemia". They reviewed a single 16-year-old study, which looked at a small number of patients suffering from heart failure.

The study by Tan, *et al*,² which was reviewed, contained measurement data when cyclizine was given 30 min before diamorphine. Although cyclizine produced haemodynamic changes, the subsequent diamorphine tended to change those variables toward the basal values, although right atrial and pulmonary arterial pressures remained significantly above basal values. To their credit May and Kumar observe that it was a small study in a very specific group of patients. Tan *et al* quoted work that

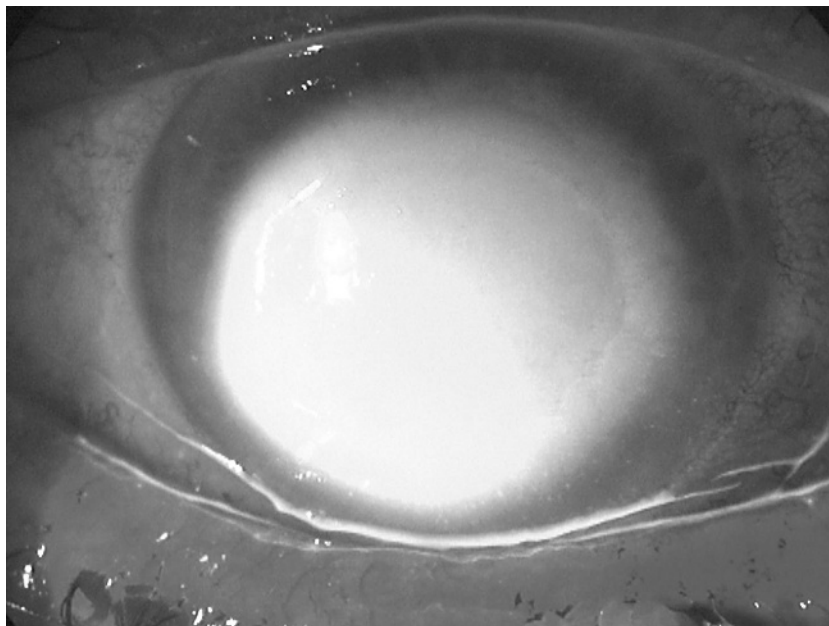


Figure 1 A large epithelial defect and gross corneal oedema is seen when fluorescein drops are applied and a cobalt blue slit-lamp filter is used.