

# Medicinal mishap

## Incorrectly dropped in the eye

### Jared A Brown

Senior poisons specialist  
(Research and Audit)  
NSW Poisons Information  
Centre  
The Children's Hospital at  
Westmead  
Sydney Children's Hospital  
Network  
Medicines information  
pharmacist  
NPS MedicineWise  
Honorary associate  
Discipline of Pharmacology  
Sydney Medical School  
The University of Sydney

### Case 1

A 70-year-old woman rang the Poisons Information Centre with complaints of stinging and redness in one eye. She had instilled a drop of mometasone lotion instead of prednisolone with phenylephrine drops, prescribed after surgery for glaucoma. She was advised to flush the eye thoroughly with running water and to present to a doctor if symptoms persisted.

### Case 2

A person called about a colleague who had rinsed his eyes with chlorhexidine and cetrimide irrigation solution, instead of normal saline, from a first aid kit. The eye was stinging. He was advised to flush his eyes thoroughly for 15 minutes and to present to a doctor if symptoms persisted.

### Case 3

A general practitioner called regarding a man who presented following referral from the NSW Poisons Information Centre. The man was complaining of persistent redness and discharge after accidentally applying ear drops (acetic acid, isopropyl alcohol) into his eyes eight hours earlier. The general practitioner found corneal ulceration after fluorescein staining and referred the patient to an ophthalmologist.

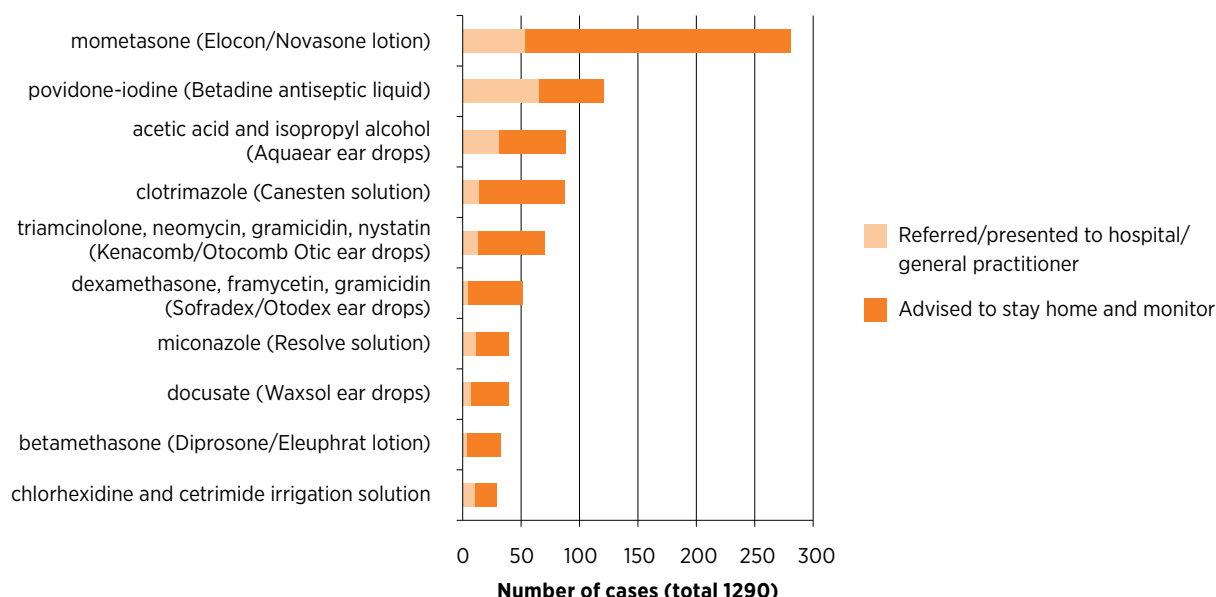
### Comment

Medication administration errors are well known in the hospital environment,<sup>1</sup> but little is known about these errors in the community.<sup>2</sup> In particular, eye administration of non-ocular medications is under-recognised. Conversely, accidental eye administration of 'superglue' (cyanoacrylates) mistaken for eye drops is well documented.

A recent retrospective review of calls to the NSW Poisons Information Centre between 2004 and 2011 found 1290 cases of accidental ocular administration of pharmaceutical products not intended for use in the eye. More than 75% of the cases were adults and 60% were female.

The main products involved were a mixture of prescription and over-the-counter steroids, antiseptics, antifungals, antibacterials, ear wax removal, ear drying and nasal decongestant products (Fig. 1). The vast majority of products applied to the eye were in dropper bottles, although 92 involved application of creams, gels or ointments (mostly intended for use on cold sores). In 31 cases dermal irrigation solutions were used and 16 cases involved salbutamol or ipratropium nebulisers. In comparison, there were around 900 cases of superglue being accidentally applied to the eye.

Fig. 1 Most common pharmaceuticals accidentally administered into the eye and reported to the NSW Poisons Information Centre, 2004-11<sup>3</sup>



Follow-up data were unknown for the majority of cases but 342 people (27%) presented to, or were referred to, a medical practitioner or hospital. In addition, three cases had corneal ulceration. One was the result of application of a lotion containing mometasone with isopropyl alcohol and propylene glycol, and two cases were due to ear drops for swimmers ear containing acetic acid and isopropyl alcohol.

## Recommendations

Mistaken identity of similar looking products appears to be the most common cause of errors (Fig. 2). Safety tips to prevent accidental eye administration, particularly of ear drops, have been highlighted by the Institute for Safe Medication Practices.<sup>4</sup> Suggestions include:

- keep the drops in the original box
- separate the drops – store different types of drops in separate locations
- discard leftover drops
- examine the product closely before administering
- warnings at the time of prescribing, dispensing or sale can help to remind consumers of the potential dangers of mixing up medicines.

Further research into the product packaging and labelling of topical pharmaceuticals is needed to help stop these preventable errors. Poisons centres can play an important role in pharmacovigilance and represent an underused resource of adverse event reports. Research could be conducted by obtaining follow-up information on exposures. It could help to identify a range of problems, such as confusing product packaging and labelling. <

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Fig. 2 Similarities in product appearance of two commonly used topical pharmaceuticals

Chloramphenicol is for ocular use



Mometasone is for dermal use



## Poisons Information Centre

Phone 131 126 from anywhere in Australia – 24 hours – for information and advice on the treatment of poisoning, bites and stings