Medicinal mishap

Atropt – Azopt substitution

*Prepared by **Catherine Dunlop**, Ophthalmologist, Newcastle, NSW*

Case

A 50-year-old female fitness instructor was referred for management of raised intraocular pressures. Gonioscopy revealed bilateral narrow angles so she was treated with bilateral peripheral iridotomies.

Topical medication was also required to achieve the desired intraocular pressures. Latanoprost caused irritable red eyes, and beta blockers were avoided because of a history of asthma. The patient was able to tolerate brinzolamide, a carbonic anhydrase inhibitor, with the brand name of Azopt.

The patient filled the second month's prescription in the late afternoon at her busy local pharmacy. This computer-generated script was for Azopt 1% twice a day to both eyes.

Noticing a different red top on the bottle, the patient checked the name was correct on the pharmacy label, which obscured the manufacturer's label on the bottle. She thought the red-topped bottle must be a 'generic brand'. She used the drops in both eyes that night.

In the morning, the patient telephoned complaining of bilateral large pupils, glare intolerance while driving to work and blurred vision in both eyes. She also mentioned her new red topped bottle. On examination, her pupils were fixed and dilated. The optic discs showed no pulsation or haemorrhages, and her vision corrected to normal in both eyes. The intraocular pressures were within the normal range and the peripheral iridotomies were patent.

After the drops were stopped, the patient's main problem was glare while driving. She was able to work as there was little reading involved. After five days, the glare and blur had significantly improved.

Comment

The patient had instilled Atropt, a brand of atropine. Using this anticholinergic drug in a patient with narrow angles in the anterior chamber can precipitate angle-closure glaucoma. Atropine causes irreversible dilatation of the pupil. The dilated peripheral iris then blocks the angle, causing high intraocular pressure, ischaemia of the optic nerve head and possible blindness.

Narrow angles are more common in Asian eyes[1] and older Caucasian eyes, secondary to cataract development. There is an increasing risk of asymptomatic narrow angles being present in our population. Reversible dilating drops, such as tropicamide for fundoscopy, still need to be used cautiously in patients who have had laser treatment. Laser iridotomies may not remain patent.

Azopt and Atropt eye drops are unfortunately similar in name. I have several thoughts which may help avoid this potentially blinding mix-up:

1. These drops are stored alphabetically. Is it possible to move one to another area?
2. The trade names are made up. Similar names should be detected by regulatory authorities before marketing. (Horse-racing officials veto horses' names which are similar!)
3. Labels are stuck over the drug company label. Why can't the dispensed labels be transparent over the manufacturer's label and opaque for the instructions on the free tag? In this way, both patients and doctors can read the manufacturer's label.
4. Presbyopia is an annoying condition. It is the inability to see small print clearly. The potentially dangerous aspect of this condition is that initially the vision is clear, except in dim light and when the person is tired or stressed. At these times the vision is not really clear. In this example, z and tr are in the same part of the word and are the only different letters. The initial and last letters are the same. Health professionals may function accurately most of the time, but they should be aware that clear vision is essential all the time. Adequate lighting in the area the drugs are held would also help.

Conclusion

Health professionals can confuse drugs with similar brand names. This exposes patients to unnecessary harm. In the case of Atropt and Azopt the confusion can blind the patient. There is less chance of confusing the generic names, but if brand names are used the prescription should be clearly written and carefully read when dispensed.

Reference

1. Yip JL, Foster PJ. Ethnic differences in primary angle-closure glaucoma. Curr Opin Ophthalmol 2006;17:175-80.

Comment by Ian D Coombes, Senior Pharmacist, Safe Medication Practice Unit, Queensland Health, Brisbane

Serious adverse events secondary to the error of selecting and dispensing a similar sounding drug are not uncommon. The author raises a number of logical and sensible suggestions on how to reduce the risk of this error recurring.

Strategies to reduce similar errors have been identified by medication safety bodies nationally and internationally:

- Generic prescribing reduces the risk of the similar sounding brand names. In this case brinzolamide would be less likely to be confused with atropine.

- Tall man letters are 'uppercase letters that are used within a drug name to highlight its primary dissimilarities with look-alike drug names', for example AZopt and ATRopt. Several studies have shown that using tall man lettering can make similar drug names easier to distinguish, and that fewer selection errors are made when tall man letters are used.[1]
- Bar coding of all medications. Pharmaceutical Defence Limited recommends the use of scanners in the dispensing process and it is either compulsory in Pharmacy Acts (in Victoria) or included in Regulations. The use of a computer to scan the medication bar code after selection to confirm that the product selected is what was intended, before completing the process and providing medication to patients, can significantly reduce the risk of drug selection errors.[2]
- Over-labelling of a manufacturer's label can be addressed by attaching the label so that it is only attached to a small area and 'flagged' or doubled over so that the dispenser and patient can still see the product's name.
- The role of the patient or carer as a 'defence' is critical and patients should be encouraged to ask and check whenever something is presented that does not look, sound or appear familiar.[3]

References

1. Use of tall man letters is gaining wide acceptance. Institute for Safe Medication Practices. 2008 July 31. www.ismp.org/Newsletters/acutecare/articles/20080731.asp [cited 2009 Sep 4]
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3. 10 tips for safer health care: what everyone needs to know. Australian Council for Safety and Quality in Health Care. 2003. www.safetyandquality.gov.au/internet/safety/publishing.nsf/Content/BE79FB82644728ABCA2571C0000330FB/$File/10tipsclnbox.pdf [cited 2009 Sep 4]

Book review

Therapeutic Guidelines: Dermatology. Version 3.

Melbourne: Therapeutic Guidelines Limited; 2009. 335 pages. Price $39, students $30, plus postage. Also available in electronic formats as eTG complete.

***Subana Amirthanandan**, Academic General Practice Registrar, Department of General Practice, University of Sydney, Westmead Hospital, Sydney*

The third edition of Therapeutic Guidelines: Dermatology provides a valuable resource for general practitioners, general practice registrars and other doctors-in-training. The book is well organised into disease categories covered in succinct chapters, facilitating its use as a quick reference guide for busy medical professionals.

The chapter on 'getting to know your drugs' is a concise summary of the numerous available prescribed and over-the-counter medicines used in current practice. Helpfully, it outlines the most suitable therapeutic preparation to use (for instance ointments, gels, lotions) for a particular skin disease.

The skin disorders commonly encountered in practice by the target medical audience are covered in thorough detail. The chapters on acne, psoriasis, dermatitis, hair disorders and nail disorders comprise stepwise treatment plans based on best practice guidelines that are easy to follow, while also providing an appropriate refresher summary on pathogenesis and classification. In keeping with the times, a chapter is dedicated to the ever evolving discipline of cosmetic dermatology, delivering relevant insights into the therapeutic options available in this field.

A limitation of the book is the absence of visual images. Dermatology is to a considerable extent a visual science and accordingly, the inclusion of a set of images to illustrate a number of the conditions would have been useful. Although the guidelines do not seek to fill the role of a dermatological atlas, visual aide memoires for less commonly encountered, unusual or frequently misdiagnosed disorders would have been a beneficial addition. The chapter on dermatological emergencies, blistering disorders and connective tissue disorders in particular, could have benefited from such a visual approach.

Overall, the book is a worthy addition to the therapeutic guidelines library. It is sufficiently detailed and offers a methodical approach for the management of dermatological disorders. I would recommend it as a valuable resource to the readers of *Australian Prescriber*.