Eye drops – What to look for

In this month’s APSIG column, Sue Edwards looks at some practical tips for eye drops.

Learning objectives

After reading this article you should:

• Be able to discuss eye drop use with patients
• Be able to identify common management issues with eye drops in the home
• Be able to provide patients with information to assist eye drop instillation
• Have increased knowledge about eye drop devices available to assist instillation.

Topics when discussing eye drops

Expiry

Patients will often state that it is a waste to throw out their artificial tears after only a few drops have been used that month and ask, ‘Do I really have to throw them out?’ Many patients are unaware that the reason for this is due to risk of contamination of the eye drops rather than decomposition of the active ingredients. I generally explain using the analogy of fresh bread which will go mouldy regardless of how meticulously and cleanly it is handled.

Storage

Storage of some eye drops requires refrigeration, e.g. latanoprost (the bottle in use can be kept out of the fridge for four weeks at temperatures less than 25°C). One advantage of keeping eye drops in the fridge is that the drops are cold when used and so can be felt when the cold drop goes in the eye (instilling cold drops is not harmful to the eye). However, if the eye drop is one that is administered once at night, storage near the bed can be helpful to aid compliance (who wants to get out of bed to get drops from the refrigerator?). Administration of ointments is generally more difficult if they are kept in the fridge due to a more viscous product.

Lack of effect

This seems to apply mainly to artificial tears. The catch cry of: ‘but I have watery eyes not dry eyes, dear’ is common and in older people, watery ‘dry’ eyes can occur and be due to incomplete closure of the eyelids resulting in poor drainage and poor contact of tears with the eye. Watery eyes can result when excessive dryness works to overstimulate production of the watery component of tears. The description that I often end up using is that artificial tears are a ‘moisturiser’ for the eye.

Underuse and overuse

Some patients are unaware that artificial tears can be used frequently (hourly) and only use them two or three times a day. If drops have been used frequently and are not helping there are many other available products to trial. The Australian Medicines Handbook provides a list of products that are preservative-containing and a separate list for those that are preservative-free and which are available on the PBS/RPBS. Preservative-free single use vials can be used more than once in a 24 hour period if they are kept refrigerated and uncontaminated.

Having encouraged the patient to use their ‘eye moisturisers’ more than they had previously been told to, the challenge is then to discourage overuse of eye drops for glaucoma. These can cause both local and systemic side effects without improving intraocular pressure and may even increase intraocular pressure if overused.1

In general though, adherence to eye drops for glaucoma is similar to other non-symptomatic conditions in that approximately 70% of people who are prescribed eye drops for the first time fail to continue having prescriptions dispensed in the first year.2 The dispensing history may provide some guidance on adherence to eye drop use. Interventions involving simplifying dosing regimes, reminder devices, education and individualised

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care planning may improve adherence rates. Reminders and individualising timing to suit lifestyle and ‘fit’ with normal activities can become quite creative and as more older people now have mobile phones these can be used as a reminder tool.

Number of drops
I still sometimes see ‘1–2 drops’ on the label instructions but as the eye pouch will be full after a single drop only one drop is needed. A second drop is a waste and may increase the possibility of systemic absorption and side effects, or have greater overflow around the eyes potentially increasing the risk of contact allergy.

More than one type of drop
It is important to separate the instillation of two different types of drops to prevent the second drop washing out the first drop. The evidence is sparse on exactly how long to leave between instilling different drops and different sources of information suggest anything from three to 15 minutes. The Glaucoma Australia patient brochure advises leaving at least 5–10 minutes between each different drop. This is a useful brochure to have in your HMR kit to discuss with patients – my only criticism of this brochure is that it would be helpful for the print to be larger. As there are now more combination drops available for glaucoma it can be useful to check the PBS to see if a combination product could replace the individual drops.

Difficulty with administration
Eye drops are often easier to self administer than eye ointments but some patients have difficulty administering drops due to a number of reasons including tremor, arthritis and hand weakness making it difficult to squeeze the bottle.

If the patient is using preservative-free artificial tears and having difficulty with administering or handling the drops, there is a soy lecithin spray formulation that may be worth trying if they meet the PBS criteria for an authority prescription. The spray is PBS listed for severe dry eye syndrome in patients who are sensitive to preservatives in multi-dose eye drops. Soy lecithin is thought to stabilise the lipid layer of the tear film and can be sprayed onto closed eyes 3–4 times a day.

If the patient has difficulty administering other eye drops there are aids available which may be of assistance. Some of these are specific for products and include:

- Xal-Ease – this device can be used for Xalatan and Xalacom eye drops and is available at no cost to the patient from Pfizer Australia by calling their medical line (1800 675 229). Xal-Ease has been shown to reduce the need for assistance with instilling drops (6.9% vs 18.1%, respectively; p<0.001) and decrease the tip of the dropper bottle touching the eye (3.2% vs 35.6%, respectively; p<0.001).

- Eyot – the blue 2.5 mL device is specific for use with Travatan and Duotray drops and the green 5 mL device is specific for Azopt and Betoptic. These are available at no charge to the patient by contacting Alcon on 1800 025 032.

Alternatively, the above products are available for patients at no charge if they contact Glaucoma Australia on 1800 500 880.

- Opticare eye drop dispensers are plastic devices that assist with administering the correct dose of eye drops by reducing the required pressure to squeeze the dropper bottle. They are available from some independent living centres and pharmacies or can be purchased directly over the internet.

- Opticare arthro eye drop dispensers feature long arms which squeeze levers over the dropper bottle body. An open basin at the top of the device sits over the eye and reduces the need for precision in placing eye drops. These devices are available in two sizes for different eye drop bottle sizes.

- Auto-Squeeze – this device is shaped to bend and fit over eye drop bottles to assist patients to squeeze the bottle when dispensing drops.

After administration
No matter how eye drops are administered, once it is in the eye the patient should be advised to look down and close the eye without blinking, squeezing or rolling the eye around. They should then press the tip of their index finger gently against the inside corner of the closed eye (over the tear duct) for two to three minutes to reduce drainage, increase the effectiveness and reduce the amount of systemic absorption and risk of side effects.

References