

Blepharitis and Dry Eye in Glaucoma

Blepharitis and dry eye symptoms are very common in the general population, especially as we get older. The incidence is even higher in people with glaucoma, with more than 50% of people troubled by this condition. The higher prevalence in people with glaucoma is likely because of the effect of the glaucoma drops and any surgery on the eye surface.

What is blepharitis and dry eye?

The tear film consists of 2 main layers:-

1. Aqueous (or watery) layer – this lies in contact with the eye surface and is produced by the lacrimal glands. The amount of aqueous tears produced decreases with age but can also be reduced by certain medical conditions or medications.
2. Lipid (or oily) layer – the main purpose of this layer is to prevent evaporation of the aqueous layer and create a smooth and stable tear film. This layer is produced by the meibomian glands which are situated on the eyelid margin. In blepharitis these glands are blocked and inflamed, resulting in an unstable tear film.

Dry eye due only to aqueous deficiency is uncommon, with blepharitis playing a role in the majority of people. Disruption of the tear film leads to inflammation of the eye surface and a vicious circle of tear film disturbance and inflammation.

Symptoms

Common symptoms of blepharitis and dry eye are the eyes feeling dry, scratchy, hot and gritty. Watering and redness of the eyes are common, as is light intolerance. As the light that enters the eye must pass through the disrupted tear film people with blepharitis and dry eye often notice blurred, smeary or variable vision. If your vision clears transiently with a few blinks, is worse towards the end of the day or after prolonged reading or screen use then it is likely blepharitis and dry eye is a factor.

In someone with otherwise healthy eyes the variations in vision due to blepharitis and dry eye are often no more than an inconvenience. However, if your vision is already reduced by glaucoma or other eye conditions the additional effect of the blepharitis and dry eye can have a significant impact on visual function.

Causes

The most common risk factor for blepharitis and dry eye is simply increasing age. In people with glaucoma the eyedrops and any surgery may also play a role. Other risk factors include contact lens wear, female sex, rosacea and rheumatological disease. Certain medications may also play a role in some people including medicines used to treat depression/anxiety, Parkinson's disease and hypertension. As blepharitis and dry eye is very common it is usually very difficult to be sure if medications are a contributing factor in individuals.

As we blink less when using screens this is a major contributing factor in many people.

Treatment

There are a number of measures which help with the control of blepharitis/dry eye symptoms in glaucoma patients:

1. Daily use of microwaveable/USB heated eye mask for approximately 5 minutes. These are widely available from pharmacies and optometry practices, or can be bought online (eg. Eyebag). Alternatively steam goggles (e.g. blephasteam) can also be of benefit but are expensive. None of these are available on prescription so need to be purchased. A low tech alternative is a warm flannel/facecloth run under the hot tap. This can be effective but does require frequent rewarming as the cloth tends to cool quickly.
2. This should be followed by massage of the eyelid margins of both the upper (massage down) and lower (massage up) eyelids to express the melted oils through the ducts in the eyelid.

3. Next, the eyelids should be cleaned with an over the counter eyelid hygiene preparation (e.g. blephasol, blephaclean, Optase TTO, many others), or alternatively a facial wash/shampoo which contains tea tree oil. Again these are not available on prescription but can be purchased from optometry practices and pharmacies. If cost is an issue an alternative is to use a cotton bud or pad dipped in an egg cup of warm pre-boiled water which has been mixed with a quarter teaspoon of sodium bicarbonate.
4. Studies have shown mixed results for Omega 3 supplementation (1000mg twice a day), Vitamin D, turmeric, ginger and riboflavin supplementation but some people find these help.
5. Limiting screen time which reduces the rate of blinking. If this is not possible then take frequent breaks.
6. Regular use (at least 3-4/day, more often if necessary) of preservative free lubricating drops. Even on days where the symptoms are less troublesome regular use is important to break the cycle of dryness and inflammation. These drops can be purchased from your pharmacy or optometrist, and certain brands are available on prescription.
7. If you take glaucoma drops switching to preservative free drops may also be helpful. If not already on preservative free drops please discuss this with the doctor or practitioner in glaucoma clinic. Not all of the drops are available in preservative-free formulations.

Although it is not usually possible to eliminate dry eye and blepharitis completely some or all of the above

measures make the symptoms manageable for the vast majority of people. If symptoms improve then the treatment can be slowly reduced, but should be increased again if the symptoms return.

For people with very troubling symptoms who are not helped by the above measures there are additional treatments available. As these often have side effects these are only recommended when the above measures have failed. In some people it is necessary to stop their glaucoma drops and consider alternative treatments such as surgery. Please only stop the glaucoma drops after discussion with the glaucoma team as there is a risk of visual loss from increased glaucoma damage.

All of the clinical staff in the glaucoma service are experienced in treating blepharitis and dry eye. If you have any further questions please ask at your next appointment or call the glaucoma unit on 01392-406045.

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