GLAUCOMA NZ TO SAVE SIGHT

Eyelights

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Managing glaucoma - the doctor's perspective

Those of us who specialise in the treatment of glaucoma know its trials and tribulations only too well. There are several aspects of the disease that are always in the forefront of our minds:

Our primary aim is, quite bluntly, to keep our patients seeing until they die and while this might seem obvious it's very important as it helps us to maintain perspective. Clearly we would prefer that no one suffer any progressive optic nerve damage or any visual field loss, but we have to weigh this against the level of intervention that would be required to achieve that outcome. In some circumstances it may be okay to accept pressures that are not quite as low as ideal and perhaps even some very slow progression of the disease.

For example, if we did glaucoma surgery for all our patients then we would achieve lower intraocular pressures than we can attain just with drops and Selective Laser Trabeculoplasty (SLT) but there would be a price to pay for that. Surgery can be very effective but some of those having it will run into problems. Complications might be as minor as a little irritation from a trabeculectomy bleb but potentially as serious as infection, severe haemorrhage and vision loss. Of course the risk of those serious problems is very small and some studies suggest that it would in fact be better to consider surgery as the first step for everyone.

But it's not all about the pressure and the trouble with these studies is that they look at averages and not at individuals. As doctors we have to consider the well-being of the person sitting in front of us and not some 'average person', so there are many more things than just the intraocular pressure that play a part in the advice we offer.

For instance, the pressure level that will ensure someone in his/her 80's doesn't lose vision in their expected lifetime (the acceptable level if you like) may well be higher than the acceptable level for someone in his/her 40's with potentially many decades of life ahead. Similarly, the acceptable pressure for that 45 year old will be different if he/she has some other medical condition that will limit life expectancy to the next few years.

The treatment approach, drops versus SLT laser for example, will be different for someone with a severe tremor or bad arthritis who is unable to manage a bottle of eye drops.

Someone with very advanced glaucoma at presentation will need a very low pressure to prevent progression but someone who is in only the early stages of the disease may be fine with a relatively modest pressure improvement.

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Certain systemic diseases and medications may limit the drops we can use. Managing glaucoma in children and in pregnancy can be particularly challenging.

We need to consider many factors like these in deciding on a target pressure and treatment recommendations for an individual patient.

Glaucoma is with you for the rest of your life whether you are born with it or develop it in your 80's. If there is a positive aspect to this it is that we, as doctors, get to know our glaucoma patients well. I have lovely relationships with many of my glaucoma patients some of whom I have known for almost 20 years. And with visual field tests and nerve scans going back that far it is very easy to know if the disease is stable or not.

Sometimes it is less clear early on in the disease. Some well-respected glaucoma specialists have claimed that because of minor variations that we all know occur from one test to the next and because of the step-wise rather than steady progression we see in some people we need as many as 7 visual fields in a row before we can be certain about progression or stability. So, as tedious as this test is, please bite the bullet and get it done and make sure you keep having your regular examination.

That need for lifelong review has financial implications particularly for those being seen in the private sector. Insurance premiums can become unmanageable for a lot of people as they get older and, acknowledging that these glaucoma checks will have to continue forever, it may at some point be sensible to consider a transfer to the public system. As someone who works in both places I can assure you that this is a common occurrence and your doctor will not be upset or offended if you ask for a transfer. We know that sometimes this is a necessity. A summary of your treatment and copies of your tests will be sent to the hospital so they have all the information they require.

Only 50% of people with glaucoma know they have it. Every major population survey around the world, including one as close to home as the Blue Mountains Study of 10,000 people in Australia, tells us that only half of those with glaucoma have been diagnosed.

Unfortunately, because of the variable nature of glaucoma with high pressure, low/normal pressure and angle closure, there is no single test that will detect it. We are entirely dependent on people visiting their optometrist and having a detailed assessment so the disease can be detected. That in turn means educating people to get this done.

As a member of Glaucoma NZ it is hoped you see yourself as an ambassador of sorts with a duty to encourage your family and friends to be tested. As a glaucoma specialist there is nothing more disappointing than to meet someone who comes to us so late that we cannot achieve our goal of maintaining vision for a lifetime.

For New Readers

To those of you who have joined Glaucoma NZ since the last issue of Eyelights, we welcome you!

For your information here are some basic facts about glaucoma:

People of all ages can get glaucoma.

There are different types of glaucoma, but they all involve damage to the optic nerve, the nerve of sight, which is at the back of the eye.

Glaucoma is not curable. If you have glaucoma it must be monitored for the rest of your life.

A family history of glaucoma means you are at much greater risk of developing glaucoma.

Letter to Members

Dear Members,

Triumphs and Tribulations

Glaucoma NZ has been in operation since 2002 delivering high quality services to the general public and health professionals as well as supporting glaucoma research in New Zealand.

Over the last 14 years we have celebrated an increasing awareness of glaucoma amongst the general population, an Annual Awareness Appeal, a membership of 11,000, over 14,000 people have attended our free public meetings, multiple resources (including our Eyelights publication) distributed at no charge to members of the public and health professionals, and an increased number of people accessing our 0800 support line.

However, we now find ourselves in the unenviable position of a funds shortfall. There are a number of contributing factors to this situation including the loss of two major sponsors over the last three years.

We have kept up our current level of activity under these circumstances for the last 12-18 months but now as we face 2015 we are severely compromised in being able to continue to meet the full delivery of our programmes and initiatives.

As we prepare for another year we are reviewing all our activities and without additional funding some of these will be in jeopardy.

We are bringing our situation to the attention of our membership to enlist your help to raise additional funds so our activities can continue.

Please help us continue our vital work at the present level by completing the donation coupon on the back page of 'Eyelights' or visit our website www.glaucoma.org.nz and make your special donation there.

With thanks.

Trustees of Glaucoma NZ

Prof. Helen Danesh-Meyer (Chair)

Assoc. Prof. Gordon Sanderson (Vice-Chair)

Dr Mark Donaldson

Dr Sam Kain

Current treatments for glaucoma aim to lower eye pressure.

Medication in eye drops can have side effects on other parts of your body. Tell your eye specialist if you notice any change in your general well-being since you started the eye drops.

If you have glaucoma tell your relatives, especially those close relatives like sisters, brothers and adult children. They have an increased risk of developing glaucoma so advise them to have an eye examination.

Glaucoma NZ is a registered charitable trust which receives no government funding. We rely solely on donations, sponsorship, grants and fundraising. All the information available to you from Glaucoma NZ is free.

Beyond Glaucoma

Dry Eyes

Dry eye is a common eye condition that affects thousands of New Zealanders every day. This article answers some questions about the condition.

How common is it?

Dry eye affects as many as 1 in 3 people over the age of 40, and it's even more common in older age groups, in contact lens wearers, and in individuals who use certain types of medications.

What are the symptoms?

In some cases dry eye can affect your quality of vision and sensitivity to light but most often it is the chronic eye irritation that causes the day-to-day problems for affected individuals. The most frequently reported symptoms of dry eye are grittiness and burning, or a sensation of sand or grit in the eyes and you might be surprised to hear that excessive watering of the eyes (epiphora) can also be a symptom of dry eye!

What's gone wrong?

In dry eye the tear film has typically become dysfunctional, causing the eye's surface to become inflamed, and resulting in chronically red and irritated eyes. This is either because of a lack of tear **quantity** (volume) or **quality**. The thin layer of tears that covers your eye, keeping it lubricated, nourished and protected has three main components; mucins at the base to help anchor the tear film in place, a watery layer with nutrients in the middle (aqueous) and oil on the surface, to reduce evaporation. The various glands that produce these components must all be functioning to create a healthy tear film of adequate quantity and quality. A tear film lacking in **quantity** is described as *'aqueous deficient'*; a truly 'dry' dry eye. One lacking in **quality**, on the other hand, is described as *'evaporative'* since it evaporates too rapidly, causing irritation and consequent eye watering; this is the paradoxical 'wet' dry eye. Evaporative dry eye is approximately 9 times more common than aqueous deficiency.

Why has my tear film become dysfunctional?

Usually a combination of factors is responsible for the development of a dry eye. Some of the more common causes are listed below:

- ***Age*:** Dry eye becomes more common with increasing age.
- ***Gender:*** Dry eye is particularly prevalent in post-menopausal women.
- ***Environment*:** Air-conditioned, centrally heated, smoky, polluted or windy settings, as well as computer use, can aggravate dry eye.
- ***Contact lenses:*** Contact lenses disrupt the natural tear film, causing excessive tear film evaporation.
- ***General health:*** Rheumatoid arthritis, diabetes, thyroid disease and other immune disorders such as Sjögren's syndrome are more commonly associated with dry eye.
- ***Oral medications:*** Some medications for allergy, depression or acne, for example, can affect the tear film, as can eye surgery, especially laser surgery (e.g. LASIK).
- ***Eye drops:*** Glaucoma is associated with a higher incidence of dry eye because of the medications used to treat the condition. Many eye drops for glaucoma contain preservatives, which are important for two reasons; to protect the drops from contamination in the bottle, and also to help the active ingredients in the drops reach their target destination (inside the eye). Unfortunately though, repeated application of preserved drops over a long period of time, can damage the superficial cells of the ocular surface, making the eye's surface less wettable and resulting in the development of dry eye signs and symptoms.

Figure 1, Left: The BlephEx™ (Optimed, NZ) thoroughly cleans the eyelids and eyelashes in patients with blepharitis.

Figure 2, Middle:The MGDRx® EyeBag®, a microwave-heated flaxseed bag, is applied to closed eyes for 5 –10 minutes, once or twice a day, to encourage oils to flow from blocked eyelid glands in MGD.

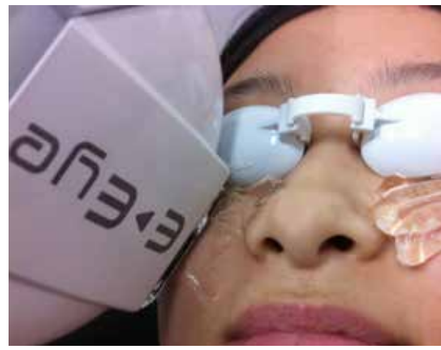

Figure 3, Right: Intense pulsed light (IPL) therapy with the E>Eye™ can improve tear film quality and symptoms of dry eye.

What can you do about it?

- ***Improve the environmental conditions:*** Minimise use of air-conditioning and central heating or, at the very least, move away from air vents. Enhance the level of moisture around the eyes with the use of humidifiers, and/or by wearing wrap-around style spectacles to create a humidified local environment, protected from airflow. Breathable foam inserts that form a seal around the eye are an option with some wraparound style glasses or sunglasses. (e.g. www.7eye.com)
- ***Minimise use of cosmetics:*** Cosmetics and face creams worn on the face and around the eyes will migrate over the eyelid margins and can disrupt the tear film, exacerbating dry eye, so aim to reduce make-up use.
- ***Optimise computer workspace and viewing habits:*** Adopt a slight downward gaze at the computer screen where possible to minimise the exposed eye area. Lowering your screen prevents excessive drying of the eye surface. Maintain full and regular blinking, at least once every 5 or 6 seconds. Software incorporating a 'blink reminder' has been designed with dry eye computer users in mind and can be downloaded free of charge (www.dryeyezone.com).
- ***Review your diet:*** Increasing your dietary intake of essential fatty acids (EFA), particularly Omega 3, can help reduce dry eye symptoms. Good natural sources of Omega 3 include oily fish (such as salmon) and linseed (or flaxseed) oil. Lacritec or Theratears have products specially formulated for dry eye. It's also important to stay hydrated, so drink plenty of water.
- ***Eyelid maintenance:*** Chronically red eyelid margins (giving the appearance of red-rimmed eyes), with crusts and debris on the eyelashes, are signs of blepharitis. Thoroughly cleaning your lid margins and eyelashes, ideally with commercially prepared lid cleansers from your optometrist or pharmacy, helps to remove crusts from around the eyelashes. Microscopic mites (*Demodex folliculorum*) can sometimes be found living in the eyelash follicles. These mites can aggravate the blepharitis and worsen symptoms. Ask your eye care practitioner to assist you with how best to manage your blepharitis. (Figure 1) Tear film quality can be adversely affected by a lack of oils due to blocked eyelid glands (meibomian gland dysfunction or MGD). Daily, or twice daily, warm compresses, using a wheat or flaxseed bag heated in the microwave, for example (Figure 2),

helps to unblock the glands by melting the oils. After warming the eyelids for 5 to 10 minutes, it's helpful to roll your finger gently over your eyelids, towards the edges (i.e. rolling with a downwards motion for the top lid and upwards for the bottom lid) to help squeeze the oils out of the glands. It should be noted that these are chronic eyelid conditions and so need regular and long-term commitment if management is to be successful.

- ***In-office therapies:*** Newer developments such as Lipiflow (not yet available in NZ) and intense pulsed light (IPL) (available in Auckland, Wellington & Christchurch) can help patients with dry eye problems caused by meibomian gland dysfunction. (Figure 3) Inserted beneath the lids, the Lipiflow device heats the meibomian glands from inside the eyelids, applying the heat directly to the glands. Pressure is then applied, by the device, to compress the eyelids and encourage emptying or 'milking' of the glands. Lipiflow is currently available in Australia.

  IPL is better known for its use in hair removal but, with a specific light profile and delivery mode, the technology has scientifically proven benefit in treating individuals with meibomian gland dysfunction, following a course of three treatments. The mechanism of action is yet to be realised, but is likely to be associated with reduced inflammation.

- ***Use artificial tears:*** Dry eye is most commonly managed with artificial tear supplements (drops). Most of the drops are best suited to the less common form of dry eye: *aqueous deficient dry eye,* by boosting tear volume but some newer products target the tear film oil layer, to cater for those with the more common form of dry eye: *evaporative dry eye*. The products range in viscosity (runniness). The most gloopy eye drops provide the longest relief from symptoms, but can cause transient blurring on application. This is often tolerated by patients with moderate to severe dry eye but those with milder symptoms might prefer a less viscous (a runnier) eye drop.

- ***Consider punctal plugs:*** Another solution for a dry eye that doesn't produce enough tears (*aqueous deficient*) might be punctal plugging. Tiny silicone plugs are inserted into the drainage channels (puncta) on the inner corners of your eyelid margins, stopping the tears (or tear supplements) from draining out, keeping the eye's surface wetter for longer.

- ***Review medication side effects:*** If prescribed medications cause significant dry eye, your general practitioner (GP) or specialist might consider alternatives. However, often the benefits of your medication outweigh the side effect of dry eye, and other means of managing the dry eye must be sought. With your eye specialist, look out for new medications. A range of non-preserved glaucoma medications is now available. Your eye specialist will be able to advise you, on an individual basis, about the suitability of new products for you, as they become available locally.

Conclusion

While dry eye is a common problem that can have a significant impact on quality of life, there are many ways affected individuals can adapt their lifestyle and environment, and work with their eye care practitioner, to cope with this chronic condition.

Eyelights Advertising Opportunity

Would you like to advertise in our Eyelights publication. A unique opportunity to reach over 13,000 members of the public and eye health professionals nationwide.

Please contact Helen Mawn, phone 0800 452 826 or email info@glaucoma.org.nz for more information.

Glaucoma NZ Professional Education Programme

Now open for enrolments.

- The online web-based professional education programme is approved by the NZ Optometrists & Dispensing Opticians Board CPD Accreditation Committee for a maximum of **10.5 Clinical Diagnostic (CD) Credits**.
- The programme consists of 7 cases – each with a case history, questions and answers for self-directed learning, followed by an associated web-based examination.
- Successfully passing all 7 cases awards the maximum of **10.5 CD credits.**

While mainly directed at optometrists, the Programme is open to any of those in the eye health field, including orthoptists, nurses and technicians.

For a full explanatory letter and enrolment options please visit **www.glaucoma.org.nz.**

Public Mail Box

How do I store my Hysite eye drops?

Before opening Hysite, keep the bottle in its box in a refrigerator protected from light.

New sponsor for Glaucoma NZ

Douglas Pharmaceuticals has become a silver sponsor to Glaucoma NZ.

The company was established in 1967 by Sir Graeme Douglas and is the largest New Zealand pharmaceutical company. In 2008 Douglas Pharmaceuticals acquired Clinicians, a natural health company manufacturing a range of research based nutritional supplements and vitamins. Included in their range of products are ones specific to eye health alongside products to help support healthy lifestyle and nutrition.

Sir Graeme and his wife Lady Ngaire are long established contributors and benefactors to medical research in NZ, most recently supporting the refurbishment of Ward 9 of the Starship Children's Hospital in Auckland.

Douglas Pharmaceuticals see Glaucoma NZ as a worthy recipient of support in its ongoing efforts to educate New Zealanders on how to minimise the risk of developing glaucoma and how blindness can be prevented by early detection and appropriate treatment.

Helen Mawn, Executive Manager, Glaucoma NZ, said she is absolutely delighted to have the support of Douglas Pharmaceuticals and is looking forward to working with them into the future.

After opening Hysite, keep the bottle in a cool place where the temperature stays below 25°C, but do not refrigerate. Keep the box properly closed and protected from light.

Do not leave Hysite in the car or on window sills. Do not carry the eye drops in the pockets of your clothes.

GLAUCOMA NZ
TO SAVE SIGHT

Special New Year Appeal

WE NEED YOUR HELP to enable us to continue our vital work at the present level. Without additional funding the full delivery of our programmes and initiatives will be in jeopardy.

An estimated 68,000 New Zealanders over the age of 40 currently have glaucoma. 50% of these people don't know they have it.

We have reached thousands of New Zealanders with our nationwide programmes but there is still much more to be done.

Public Meetings	Workplace/Community Seminars
Educational Resources	0800 Advisory Service
Eyelights Publication	Health Professionals Education Programme
Research	Advocacy

Your support is important to us – we can't do it alone.

THANK YOU for your generosity - every donation counts!

YES! I would like to make a donation to the Special New Year Appeal.

☐$300 ☐$100 ☐$50 ☐$20 ☐$_____(other)

Name _____

Address _____

_____ Postcode_____

Phone No _____ Email _____

☐ I enclose my cheque made payable to Glaucoma NZ

☐ Please debit my credit card ☐ Visa ☐ Mastercard

Name on Card _____

Card No _____/_____/_____/_) _____

Expiry Date ____ /____ Signature _____

Donations of $5.00 or more are tax deductible and will be receipted.

YES! I would like to receive more information about:

☐ Donating on a regular basis by Automatic Payment
☐ Leaving a gift in my Will to Glaucoma NZ
☐ I have already included Glaucoma NZ in my Will

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