

Ocular Hypertension

Your eye is like a balloon and its shape is maintained by the internal pressure. This pressure comes from a transparent watery liquid which fill the eye. the liquid is always being produced and should escape gradually to keep the pressure at the right level. If it cannot leak out fast enough or too much fluid is produced the pressure rises.

Now if the pressure in the eye rises above a critical level damage to the Optic nerve (This carries the vision from the eye to the brain for you to see with) then the vision becomes damaged. It usually affects the peripheral vision first and takes years to have any effect. This condition is called Glaucoma. However in some people although the pressure is above what we would call normal, it does produce any discernible damage to the optic nerve.

What is the normal eye Pressure

Average Eye pressure is between 15 -16mmHg.

21mmHg is considered the upper limit of Normal at which if the visual fields are reduced most people would consider you have developed classical Primary Open Angle Glaucoma.

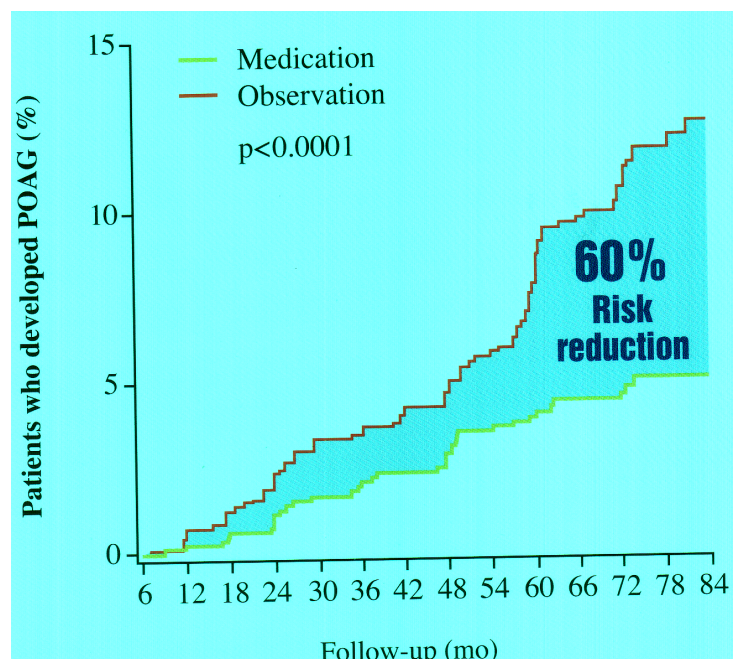
How do we measure if there is any damage to the optic nerve?

This is undertaken by carrying out a computerised Visual field examination on a machine called a Humphrey field analyser. It takes about half an hour to do and is a very sensitive test of optic nerve function. Usually this will be done anything from 3 times per year to once per year. In your case this is the only way in which it is possible to discern whether you have changed from having Ocular Hypertension to having developed Glaucoma.

Treatment

The very large Ocular Hypertension Study (Arch Ophthalmol. 2002;120:714-720) established whether treating people with elevated IOP was beneficial or not. The study showed that treatment reduced the development of Chronic Open Angle Glaucoma in 60% of people over 7 years. This is a major finding and affects now whether we suggest treatment or not.

Treatment is usually with drops put into the eyes. Once treatment has commenced regular follow up with computerised Humphrey Visual Field will be required continually.



Will I develop Glaucoma

There is a 10% risk per year of you developing glaucoma over 5 years. It has to be pointed out that most people will not and with treatment this risk is reduced to 4.4% but even with treatment patients will develop glaucoma. The study also showed that those with higher eye pressure, larger optic cups (a feature of the back of the eye - the nerve of the eye), and those older were more likely to develop Chronic Open Angle Glaucoma. This research has meant we now tend to treat Ocular Hypertension (OHT) earlier than we did before.

Family History

This is important for Glaucoma patients, details for Ocular Hypertension are less clear, but it is wise in my opinion to follow the same guidelines which are that ALL first degree relatives (Parents, children, brothers/sisters) who are over the age of 40 Years should have an eye Examination at their Opticians including a pressure check. This is normally available as a FREE NHS sight test so do ask to sign the blue NHS form.

2009 NICE have reviewed Ocular Hypertension and chronic open angle glaucoma and now recommend that any one found to have intra-ocular pressure higher than 21mmHg at the opticians should have a consultant review with Goldmann intra-ocular pressure, Corneal thickness, disc analysis (Usually Heidelberg Retinal Tomography but increasingly now GDx. (optic nerve fibre analysis) and computerised Humphrey visual fields. After this a risk calculation is done on the likely hood of progression to chronic open angle glaucoma and if this is elevated consideration for treatment to reduce the risk as per the studies above is advised.

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