

## Normal pressure glaucoma

Written by Administrator

Wednesday, 13 January 2010 11:28 - Last Updated Sunday, 21 October 2012 18:53

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**Normal pressure glaucoma** (or normal tension glaucoma) is an optic neuropathy associated with low intraocular pressure (ie less than 22 mmHg).

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The following are known associations of normal pressure glaucoma:

- steroid use (eg nasal sprays, inhaled or oral steroids, or steroid creams) - in this case steroids may infact elevate IOP but this may not be detected and be falsely diagnosed as normal pressure glaucoma
- vasospasm – migraine / Raynauds
- coagulopathies – previous blood loss or shock like episode
- systemic nocturnal hypotension
- autoimmune disease
- thyroid disease (increased risk)
- sleep apnoea (especially in overweight men)
- Alzheimer's disease

Other problems to be considered

- intermittent IOP elevation - can be excluded with diurnal IOP measurements
- burnt out glaucoma
- congenital anomaly
- myopia with peri-papillary atrophy
- optic nerve coloboma
- vascular etiology
- carotid occlusion
- previous blood loss
- hereditary optic neuropathy
- Lebers optic neuropathy
- tonometric error (thin cornea)

Investigations

- FBC – rule out anaemia
- CRP / ESR – rule out a condition called "anterior ischaemic optic neuropathy"
- VDRL/FTA – syphilis is a very rare association
- ANA – autoimmune diseases, also Ro, La, Sm
- paraproteinaemia – rule out lymphoproliferative disease
- Lebers – mitochondrial testing where indicated

Imaging

- HRT / OCT / GDx

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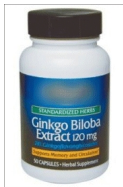
- MRI if asymmetry, unusual VF, progressive fields, dyschromatopsia, APD with mild cupping
- carotid dopplers
- CXR to rule out sarcoidosis

### Other tests

- 24 hour ambulatory blood pressure monitoring

### Treatment

- ALT not recommended
- Trabeculectomy with Mitomycin C, if IOP in single digits is required
- In some cases, your physician might recommend Ginkgo Biloba (40mg three times a day). There is some evidence that points to a benefit here, but this medication is not suitable for everyone and it's use is advised on a case-by-case basis, after discussion with your glaucoma specialist.
- Future medication, for selected subgroups of patients with glaucoma, may include memantine, a tablet medication that may have beneficial protective effects on the optic nerve (randomised controlled trials are awaited).



Ginkgo Biloba - not recommended for most patients with glaucoma - little evidence for benefit.