Glaucoma: who to refer for testing and how to manage their treatment

Glaucoma causes progressive and irreversible loss of vision and is currently the leading cause of preventable blindness in New Zealand. It is usually diagnosed by an Ophthalmologist or Optometrist. However, General Practitioners can improve glaucoma detection rates by encouraging people with risk factors to have their eyes tested regularly. Ideally every person should have the health of their optic nerve assessed before age 45 years, and then repeated five-yearly. People with risk factors, e.g. a family history of glaucoma, should have their eyes examined earlier.

Ocular hypertension (intraocular pressure [IOP] > 21 mmHg) is no longer considered a defining feature of glaucoma, and in patients aged over 55 years glaucoma with an IOP less than 21 mmHg is relatively common. **Therefore glaucoma is best thought of as an optic neuropathy for which ocular hypertension is the most important risk factor.**

Reducing IOP is the only pharmacological strategy for slowing glaucoma progression; this includes patients with glaucoma who have an IOP within the normal range. There are five classes of medicines used to reduce IOP and treatment is invariably initiated by an Ophthalmologist.

A topical prostaglandin analogue is usually the first choice treatment of glaucoma due to a higher treatment efficacy and the once daily dosing of this class of medicine. Topical beta-blockers are recommended as an alternative treatment in the initial management of glaucoma, unless there are contraindications. Systemic absorption of topical medicines does occur which can result in adverse interactions with other treatments, e.g. antihypertensive medicines, or exacerbations of underlying conditions. When patients cannot tolerate topical prostaglandin analogues or beta-blockers, or they are ineffective at reaching the target IOP, other topical medicines will be considered before systemic administration is considered.

Glaucoma is symptomless until it is relatively advanced, therefore patients may not appreciate the consequences of poor adherence to treatment. The Double DOT (Digital Occlusion of Tear duct and Don't Open Technique) is the preferred method for eye drop administration because it maximises the efficacy of topical medicines and reportedly reduces systemic absorption by up to 70%. It is recommended that General Practitioners perform regular medicine reviews for patients being treated for glaucoma, including:

1. Ensuring the patient is persisting with treatment, has sufficient medicine till their next renewal and that they understand the potential consequences of stopping treatment
2. Confirming the patient is using the Double DOT method of medicine administration
3. Reviewing any new diagnoses or treatments that may interact with IOP-lowering medicines
4. Confirming the patient is attending follow-up consultations with an Ophthalmologist
5. Ensuring the patient has discussed the need for family members to have their eyes examined at least five years earlier than the age when the patient developed the condition

Peer group discussion points

1. How does the fact that ocular hypertension is no longer considered a defining characteristic change the way you think about glaucoma?
2. What are your criteria/recommendations for referring a patient to an optometrist to be checked for signs of glaucoma? Is it realistic to recommend that all patients have their eyes checked regularly from age 45 years?
3. What has been your experience in terms of treatment adherence in patients with glaucoma? What could you do differently to ensure that patients are regularly taking their IOP-lowering medicine(s)?
4. What is your opinion on the potential interaction between topical beta-blockers and other medicines prescribed for cardiovascular co-morbidities?

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