

FIVE THINGS TO KNOW ABOUT ...

Glaucoma

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See also www.cmaj.ca/lookup/doi/10.1503/cmaj.140685**Glaucoma is the most common cause of irreversible blindness in the world**

Glaucoma affects 400 000 Canadians and 67 million people worldwide. Nevertheless, for 50% of patients with glaucoma in developed countries, the condition remains undiagnosed.¹

Primary open-angle glaucoma is a slow and silent thief of vision

Primary open-angle glaucoma is the most common type of glaucoma in developed countries (85%–90% of cases).³ It is characterized by slow, painless loss of the visual field, with sparing of the central vision until the late stages, which explains why patients often present late.² Routine eye examinations are important for early detection of glaucoma, before irreversible loss of vision, especially for those at higher risk (e.g., older people and those with a family history of glaucoma).⁴ Black people and those with myopia are also at greater risk.⁵

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Glaucoma is an optic neuropathy with characteristic damage to the optic nerve leading to loss of visual field

Glaucoma causes the death of retinal ganglion cells by apoptosis, which leads to the loss of optic nerve axons.² It is most often associated with, but is not defined by, high intraocular pressure and is diagnosed by characteristic fundoscopic findings (Figure 1) and visual field defects.²

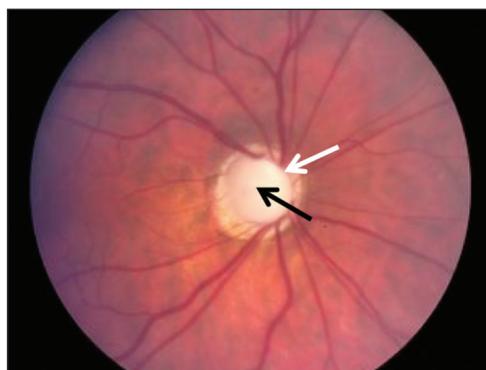


Figure 1: Fundoscopy showing glaucomatous optic disk (white arrow) with severe cupping (black arrow) from loss of neuroretinal rim.

Patients require timely therapy to slow the progression of open-angle glaucoma

In most cases, glaucoma eye drops (e.g., latanoprost, a prostaglandin analogue) effectively slow progression of the condition.⁶ However, patient education is critical: in one multicentre survey, 61.7% of patients were either non-compliant with their medication or had improper administration technique.⁷ Laser therapy or surgical interventions (e.g., trabeculectomy) are other options, if required.⁶

Acute angle-closure glaucoma is a medical emergency requiring prompt referral to an ophthalmologist

Primary angle closure is generally bilateral, although 90% of acute attacks are unilateral, caused by iris bombe leading to a closed angle. During an acute crisis, the patient presents with severe eye pain; red eye; blurred vision; edematous cornea; a fixed, mid-dilated vertically oval, nonreactive pupil; and high intraocular pressure.⁸ After the pressure is lowered with drops and medications, laser iridotomy is performed to relieve the pupil block.⁸ Prophylactic laser iridotomy or lens extraction that widens the angle can be used to prevent pupil block.⁸

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