

An 80-year-old woman with possible iritis

Commentary by **SAM LERTS** MB BS, MPH, FRACO

Can acute glaucoma be excluded in this patient who has a red eye with a cloudy cornea and acutely compromised vision but no pain?

Case scenario

An 80-year-old woman presents feeling 'off colour'. She is noted to have a red right eye. On questioning she reports decreased vision over four days, but no pain. Only the right eye has reduced vision: the patient can count only fingers. She has bilateral cataracts and, in her right eye, a cloudy cornea and circumlimbal injection. I suspect acute iritis and send her to an ophthalmologist.

In the absence of pain, can acute glaucoma be excluded? How common is acute iritis? What initial treatment should the patient have and is referral needed for this? Is investigation for underlying causes required?

Commentary

Urgent referral to an ophthalmologist is mandatory for this patient because her vision is acutely compromised. Differential diagnoses to be considered are:

- acute angle closure glaucoma (Figure)
- herpetic keratouveitis
- ischaemic central retinal vein occlusions
- corneal abscess
- a masquerade syndrome (see later).

Acute angle closure glaucoma cannot be excluded in the absence of pain because many very elderly patients have a high pain threshold. However, the absence of pain is unusual in this clinical setting. A red eye with circumlimbal injection and a cloudy cornea may be acute angle closure glaucoma or iritis complicated by ocular hypertension as in herpetic keratouveitis.

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Acute idiopathic iritis is a disease of the young and is generally uncommon in the elderly. If the cataract is hypermature, the raised intraocular pressure may be phacomorphic or phacoanaphylactic (acute glaucoma due to an intumescent cataract that pushes the iris forward causing angle closure, or leaking lens protein leading to lens induced iritis, respectively). The most important assessment is intraocular pressure, which can be performed by digital palpation of the globe through a closed eyelid if a tonometer is unavailable. If intraocular pressure is highly elevated (that is, above 30 mmHg), the angles should be assessed by performing gonioscopy at a slit lamp. Any iritis can be detectable as the presence of keratic precipitates or anterior chamber cells, or both. If the angles are closed, a diagnosis of acute angle closure glaucoma is established. If the angles are open, herpetic keratouveitis should be suspected, and any corneal stromal vascularisation or typical dendritic corneal ulcer would support this diagnosis. Neovascularisation of the iris (rubeosis iridis) would suggest rubeotic glaucoma due to undiagnosed ischaemic central retinal vein occlusion.

If the intraocular pressure is normal, other causes of a cloudy cornea and inflamed eye to consider would include a corneal abscess and herpetic keratouveitis without raised intraocular pressure since other forms of iritis are less likely to lead to a cloudy cornea. Staining the cornea with fluorescein would reveal any sign of epithelial defects from trauma, dendritic ulcer, chemical burn or foreign body (an infected minor corneal abrasion may lead



Figure. Acute glaucoma. Permanent visual damage can occur if treatment is delayed.

to a corneal abscess, and hence a cloudy cornea).

If it is not possible to visualise the fundus due to the cloudy cornea or a dense cataract, or both, the possibility of a masquerade syndrome should be considered. Such syndromes include endogenous endophthalmitis, intraocular tumour or metastases, or lymphoma, particularly for a patient of this age. An ultrasound examination of the globe will allow some, but limited, assessment of the posterior segment of the eye.

Systemic investigation is generally not required in acute angle closure glaucoma, although electrolytes levels should be determined as treatment often includes administration of acetazolamide (Diamox) or mannitol (Osmitol Intravenous Solution).

Herpetic keratouveitis is a clinical diagnosis and serology is generally not useful. An elderly patient with a cloudy cornea and red eye who is unwell – particularly if he or she has been unwell prior to the onset of eye symptoms – may have an underlying infection or cancer. Appropriate investigations should be directed by the accompanying systemic symptoms. Treatment would depend on the diagnosis, but generally acute ocular hypertension should be controlled before topical antibiotic or antiviral medication is commenced. Topical corticosteroids may be needed to reduce ocular inflammation, although these should not be used if there is a corneal epithelial defect or herpetic corneal ulcer.

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DECLARATION OF INTEREST: None.