Phacolytic glaucoma

DESCRIPTION

Phacolytic glaucoma is a form of secondary open-angle glaucoma associated with hypermature cataract, where lens material leaks into the anterior chamber through a permeable but intact lens capsule.

Lens high molecular-weight proteins, and engorged macrophages that ingest the proteins, block the trabecular meshwork causing elevated intraocular pressure (IOP) and an inflammatory reaction.

Other lens-related secondary glaucomas are:

- Phaco-allergic uveitis: a ruptured capsule following surgery or trauma may induce an autoimmune granulomatous inflammatory reaction, due to lens material liberated into the aqueous. It may cause lens particle glaucoma, due to obstruction of the aqueous outflow channels
- Phacomorphic glaucoma: an acute or creeping angle-closure glaucoma where an enlarged cataractous lens causes a shallowing of the anterior chamber and pupil block or physical closure of the anterior angle. (See acute angle closure glaucoma)

SYMPTOMS

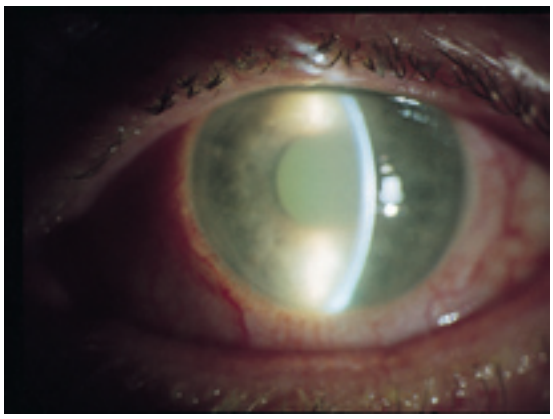
The patient typically presents with an acutely painful eye, lacrimation and photophobia. Vision may already be poor from the cataract, with a further potential reduction.

SIGNS

The eye is usually markedly injected with corneal oedema and a significant anterior chamber inflammatory reaction. IOP is frequently very high with white particles of lens material in the aqueous. The latter may congregate in the inferior angle (pseudo hypopyon).

There is a mature or hypermature cataract and gonioscopy reveals an open anterior chamber angle and engorged macrophages may be seen blocking the trabecular meshwork.

The cataractous lens is not traumatised or ruptured. It may not be possible to examine the fundus because of the cataract, in which case a B-scan ultrasound examination should be undertaken to exclude such conditions as retinal detachment and choroidal melanoma.



Phacolytic glaucoma with high intraocular pressure, cloudy cornea, flare in the anterior chamber and hypermature cataract. Image courtesy of Jack Kanski, *Clinical Ophthalmology* fourth edition, Butterworth-Heinemann

PREVALENCE

Phacolytic glaucoma is rare in developed countries, as cataract extraction is undertaken earlier than in the past.

DIFFERENTIAL DIAGNOSIS

Other conditions where lenticular material is liberated into the anterior chamber potentially producing inflammation and raised IOP such as phaco-allergic uveitis and lens particle glaucoma. Further differential diagnoses include primary acute closed-angle glaucoma, inflammatory glaucoma, glaucomatocyclitic crisis and post-operative endophthalmitis.

MANAGEMENT

Topical medication

The condition is initially managed medically to reduce the level of IOP and the inflammatory reaction with topical aqueous suppressants, steroids and cycloplegics.

Incisional surgery

The cataractous lens should be extracted expediently within a few days.

The full series of these articles will be available in the book *Posterior Eye Disease and Glaucoma A-Z* by Bruce AS, O'Day J, McKay D and Swann P. £39.99. For further information click on the Bookstore at **opticianonline.net**

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