Cystoid Macular Edema Post cataract surgery

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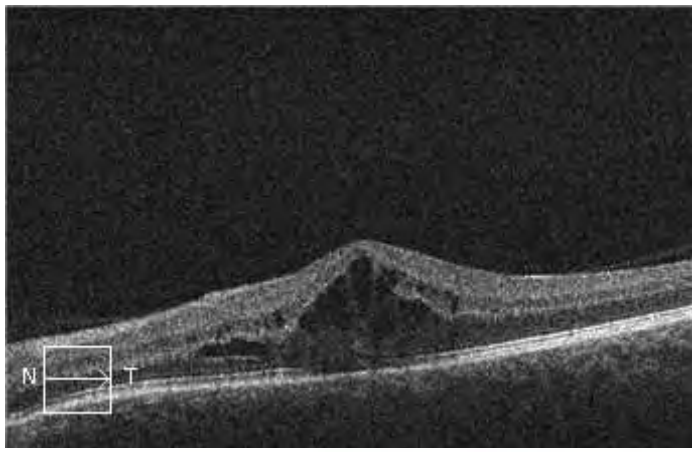
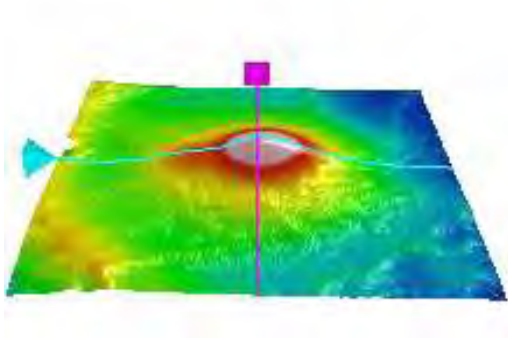
Cystoid macular edema remains one of the most frustrating situations of all for both patient and ophthalmologist. It is due to the collection of fluid at the central part of the vision, which then becomes blurred.



Usually, the patient's spirits have been lifted by a seemingly good result for several months following surgery when, unexplainably, central visual acuity drops, often to the level of 20/200. Although this condition is sometimes associated with vitreous loss, it occurs frequently enough in uncomplicated cases. More than half of all patients who undergo intracapsular cataract extraction develop this condition to at least a subclinical degree, as manifested by characteristic changes on fluorescein angiography. Significant reduction of visual acuity occurs in approximately 10% of these cases. In extracapsular techniques it appears that the incidence of clinically significant cystoid macular edema is reduced to only 2% or 3%. In Phacoemuslification the incidence is further reduced in my experience. Most studies comparing the incidence of cystoid macular edema in intracapsular versus extracapsular techniques show two to four times greater incidence in the former. Usually this condition is self-limited and lasts for only several months, but occasionally permanent macular changes do occur. The common denominator in the development of cystoid macular edema appears to be that of persistent uveitis (inflammation in the eye). It appears likely that direct mechanical irritation of the iris by the lens implant, or traction on vitreous strands at their attachments to the pars plana and peripheral retina when the vitreous body has shifted anteriorly at the time of vitreous loss, produces this condition. For some currently inexplicable reason, these chronic inflammatory changes lead to abnormal leakage of the perifoveal capillaries, resulting in cystoid macular edema.



Attempts at using various anti-inflammatory preparations, including corticosteroids and indomethacin, have not been definitely effective in treating or preventing this condition.

Acetazolamide has been shown to increase resorption of subretinal fluid and increase adherence between the retina and the retinal pigment epithelium, suggesting that this medication may be used to treat cystoid macular edema directly. In some patients whose cystoid macular edema is obviously associated with vitreous adhesions to the wound or lens implant, pars plana vitrectomy or Nd:YAG laser vitreolysis may provide dramatic improvement of this condition. Otherwise it is a question of waiting for the fluid to absorb naturally.

Investigations

1. Optical Coherence Tomography as above shows the fluid
2. Fundus fluorescein angiography (photographs with a contrast dye) produces this petaloid pattern of leakage.

My usual regime is to restart

1. Steroid eye drops eg. Maxidex
2. Acular A non-steroidal drop like aspirin that has been well reported to help.
3. Diamox (Acetazolamide) tablets

This regime usually results in resolution of the fluid and improvement in the vision over the following few weeks. In the rare cases that do not respond other medication such as orbital floor Steroids or Intravitreal Avastin can be tried.

However this is usually self limiting and usually responds well to treatment.

Mr Lee 2009