

# Strategies for Managing a Concurrent Cataract and Macular Hole

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*How do you manage a patient who presents with a visually significant cataract and an impending macular hole that is confirmed by ocular coherence tomography?*

## GEORGE BEIKO, BM, BCH, FRCSC

This is not an infrequent finding in patients who are referred for cataract surgery. The clue, clinically, is that the decrease in vision is out of line with the degree of nuclear sclerosis or lenticular opacity. I always look at the macula with a 60D lens at the slit lamp prior to surgery (as I was trained in the dark ages before technology). If the macula is suspicious, then I will perform an optical coherence tomography (OCT) to confirm the presence of a macular hole. Once the diagnosis is made, I refer the patient to my preferred vitreoretinal surgeon for management; he is a very capable surgeon who does excellent cataract surgery. He will perform a combined cataract surgery with implantation of an IOL and internal-limiting membrane peeling (saving the patient from trips to the OR). I am intrigued by ocriplasmin (Jetrea, Thrombogenics), but as it is only effective in a minority of patients, I await guidance as to who would be an ideal patient for these injections.

## STEVEN J. DELL, MD

When this situation occasionally comes up, I send the patient to a retinal colleague to set proper expectations and fully define the extent of the pathology. Typically, with vitreomacular traction, cataract surgery will precipitate a posterior vitreous detachment, and the resulting retinal status is unpredictable preoperatively. I

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—George Beiko, BM, BCH, FRCSC

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explain to the patient that there is no way to remove the cataract without eventually creating a posterior vitreous detachment, which could result in a macular hole. Even if the patient were to develop a macular hole, a retinal surgeon would want the cataract removed before addressing the retina.

I also tell patients that there is a poor correlation between the appearance of the retina on the preoperative OCT and visual acuity after cataract surgery. My favorite way to explain things like this is as follows: Two things are wrong with the eye, which is like a tall glass that is filled with two liquids, vodka and water. There is no way to tell how much is vodka or water unless the vodka is distilled off and the amount of water that is left over is measured. The leftover water is the problem with the retina.

This is a difficult clinical situation, but with adequate disclosure up front, the case usually proceeds smoothly. The worst scenario is learning after the fact that retinal pathology was present all along. Getting the patient to understand that the cataract precluded the discovery of retinal pathology preoperatively is a nightmare. Interestingly, I have discovered a few cases of vitreomacular traction incidentally with no clinical clue other

than that the visual acuity did not match the cataract's density. OCT has changed the way we practice.

### **RICHARD S. HOFFMAN, MD**

My approach would basically depend on the patient's ability to understand the nuances of the clinical situation. In a patient who was able to comprehend his or her pathology and options, I would explain the probable need for a pars plana vitrectomy with release of the vitreomacular traction. I would explain that our retina specialist prefers to have the cataract removed before proceeding with the retinal surgery to enhance the view and reduce potential lenticular complications from the surgery. I would explain the remote possibility of the cataract surgery worsening his or her vision due to increased macular edema or the development of a full-thickness hole. I would also explain the remote possibility of the cataract surgery improving the vitreomacular traction by creating a complete posterior vitreous detachment. I would then take out the cataract and refer the patient to our retinal specialist. If the patient were unable to understand these nuances, I would send him or her to the retinal specialist before removing the cataract.

### **MELISSA TOYOS, MD**

The happiest way to discuss this case scenario is with confirmation of retinal pathology prior to cataract surgery. This implies that either I have been able to appreciate some subtlety in the fundus examination or that the patient was symptomatic due to macular traction and was sent for a macular OCT to hopefully illuminate the source of symptoms. A more challenging case scenario is the preexisting retinal pathology that is not discovered before surgery, which often leads to lengthy and difficult conversations with unhappy patients. In this case, the OCT will be useful to discuss findings with the patient and to set reasonable expectations for postoperative outcomes. I would refer the patient to our retinal specialists for examination, ocriplasmin, which has been recently approved by the FDA for vitreomacular traction, and potentially observation before pursuing cataract surgery.

### **PARAG MAJMUDAR, MD**

This case illustrates the importance of a complete preoperative cataract examination. In today's world of barreling through the clinic to see more patients, it would be easy to overlook something like an impending macular hole, as the patient's visual acuity could be chalked up entirely to the presence of a cataract. After the case, however, when the visual acuity does not meet expectations, the patient may be inclined to think

that surgery caused the problem.

If presented with this situation, I would advise the patient that this condition exists and refer him or her to a vitreoretinal colleague. In many cases, the retinal specialist may confirm the diagnosis and recommend a more thorough evaluation after the cataract's extraction. The addition of ocriplasmin to the pharmacologic armamentarium for symptomatic vitreomacular adhesion may change the paradigm that retinal specialists use, but in any case, the take-home message is that there is no substitute for careful preoperative examination.

### **KEITH A. WARREN, MD**

The appropriate management for this patient should include a referral to a retinal specialist for further evaluation. As a practicing retinal specialist, my evaluation would include a slit lamp and contact lens exam, spectral domain OCT, and possibly angiography. Angiography would be useful as a prognostic indicator if concurrent cystoid macular edema is noted or suspected. (Cystoid macular edema has a worse prognosis and should be addressed more promptly.) Once the anatomy of the macula has been established, an assessment can be made regarding the role of the cataract versus macular traction as the etiology of the patient's symptoms. Treatment options for significant macula traction ultimately include enzymatic vitreous-retinal interface cleavage (ocriplasmin) and a vitrectomy with an internal-limiting membrane peel. During the postevaluation discussion with the patient, I inform him or her of my findings, and I usually recommend cataract surgery be performed first. This approach typically helps to delineate between the cataract and macula as the culprit of the patient's visual complaint and does not hamper the retinal surgery or the outcome. Sometimes, these patients are quite satisfied after cataract surgery with abatement of their symptoms and only require periodic monitoring of the retinal disease. I do not recommend implanting a multifocal IOL in these patients, because the reduction of contrast sensitivity in patients with macular disease can be exacerbated with this type of lens.

### **JEFFREY WHITMAN, MD**

If OCT reveals a lamellar hole (not a stage 4 macular hole), I would recommend proceeding with cataract surgery after a discussion with the patient. Many retinal surgeons contend that patients with lamellar holes and early macular holes typically do not do as well with a pars plana vitrectomy as with full-thickness holes. After seeing a retinal physician for a consultation for a baseline evaluation, the patient would undergo cataract surgery with implantation of an acrylic IOL.

Additionally, I would start the patient on a nonsteroidal anti-inflammatory drug 3 days preoperatively and would consider injecting triamcinolone behind the lens at the end of the surgery to help reduce the inflammation pre- and postoperatively. I would send the patient back to the retinal specialist if the patient experienced a change in vision or if a change was noted during the retinal examination. ■

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