

## Special Considerations in Cataract Surgery for Uveitis Patient

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When it comes to cataract surgery in a patient with a coexisting disease, uveitis poses a particular challenge. "The most critical thing to recognize is that the uveitis patient should not be treated as a usual cataract patient, "Failure to take precautions to prevent the uveitis from flaring up due to the trauma of cataract surgery is asking for complications".

The surgical management of the patient with uveitis, although critical, is less important than managing the patients medically before and after surgery. Even if you are a professional surgeon, but if you don't have the uveitis controlled beforehand, or you don't control the uveitis afterward, you're going to have a bad outcome."

### Keys of successful visual outcomes in uveitis patients undergoing cataract surgery

- **A quiet eye for three months:** "Generally, you want the uveitis to be quiet for three months and to eliminate the macular edema before performing cataract surgery, However, good controlled trials that consistently support this paradigm are lacking. Some surgeons feel that two months with a quiet eye is sufficient, especially for cases of rapidly responsive uveitis without macular edema; others prefer longer than three months.
- **Treatment of the inflammation:** If the preoperative clinical exam shows active uveitis, it is necessary for the ophthalmologist to try to control it by intensifying the topical corticosteroid dosing regimen and adding oral corticosteroids.
- **Ask for consultation in refractory cases:** However, if the stronger medical therapy does not begin to suppress the

inflammation within several weeks, the patient should be referred to a uveitis specialist for more aggressive therapy prior to the cataract surgery. A complete workup from a specialist prior to the cataract surgery may be requested.

- **Use corticosteroids:** Steroid eye drops one week before surgery, oral steroids two to seven days before surgery, and, often, giving intravenous and periocular or intravitreal steroids at the time of surgery. This is followed by topical and oral steroids, tapering down according to the degree of inflammation. "This course will reduce the possibility of a disease flare or pseudophakic macular edema.
- **Consider using NSAIDs:** Because uveitis puts the eye at risk for pseudophakic cystoid macular edema, some surgeons add a topical nonsteroidal anti-inflammatory drug (NSAID) such as ketorolac 0.5 percent.
- Starting the week before surgery, to avoid using the NSAID during the first postop week while the epithelium heals, and then to resume the NSAID for one to two months postoperatively.
- Despite that NSAIDs are not particularly helpful for uveitic macular edema in general. But they can help reduce the risk of the edema that the surgery itself would contribute to.
- **Look for PCO sooner:** Posterior capsular opacification (PCO) occurs earlier in uveitic eyes. Nd:YAG laser capsulotomy may need to be performed sooner after surgery in symptomatic patients than it would be in nonuveitic pseudophakic eyes. However, the capsulotomy should be deferred if the uveitis is still active or if there is CME.

## Special concerns and challenges

### Anatomic challenges

It is important to minimize trauma to the iris during the cataract surgery, if you get bleeding, if you traumatize the iris, you will tend to have more synechiae after surgery. Cosmetically, the eye won't look as good, and the damage probably also will increase the risk of macular edema".

Moreover, certain common anatomic characteristics of the uveitic eye add complexity to the cases. These include the following.

- **The pupil:** It may dilate poorly due to scarring, have an irregular shape, be small, or be large but unstable. "Managing the small pupil is the key intraoperative aspect. It may be necessary to use pupillary ring or other device like iris hooks to expand or stabilize these pupils.
- **Limited intraocular views:** This can be caused by the small pupil, band keratopathy, calcium deposits on the corneal surface, or vitreous debris.
- **Weak zonules and a floppy iris:** Usually seen in uveitic eyes, especially in those with previous vitrectomy, these characteristics can impede a good capsulorrhexis and make the iris prone to bleeding, a capsular tension ring [CTR] may be needed to stabilize things".

### Concurrent surgery?

Because uveitis can worsen coexisting ocular problems such as glaucoma, and vitreous debris, epiretinal membrane, other surgical correction of these conditions with the cataract surgery may be considered. Combined surgery in a patient with glaucoma might also be indicated if the patient is known to be a strong steroid responder.

### IOLs for adults

In the past, ophthalmologists were taught that aphakia was best for uveitic eyes, to avoid postoperative complications associated with the intraocular lenses (IOLs) of the time. Today, advances in phacoemulsification and in IOL design have made it possible for most adults with uveitis to have any foldable, one-piece or three-piece monofocal IOL.

- **Plate-haptic IOLs:** Plate-haptic IOLs are not preferable because of the likelihood that a uveitis patient will require an

Nd:YAG capsulotomy later, which increases the risk that this type of lens could dislocate posteriorly through the capsular opening.

- **Multifocal/diffractive IOLs:** These are contraindicated because irregular pupils or IOL decentration, both of which are more common in eyes with uveitis, can cause glare and halos.
- **Silicone IOLs:** I prefer to avoid these if there is any retinal pathology and there is a possibility of vitrectomy in the future.

### IOLs for children?

At present, young children are the only uveitis patients who are often left aphakic after cataract removal. This allows development of the eye and the visual system before an IOL is implanted, which usually takes place when the child reaches school age. Until then, any refractive error is corrected with ultra-soft extended-wear contact lenses or, in bilateral cases, with glasses.

- **When it's time for an IOL:** A primary posterior capsulotomy should be performed when the IOL is implanted. PCO is common in young children, and a secondary Nd:YAG capsulotomy would expose them to the risks of general anesthesia again. Some surgeons prefer reverse optic capture.