FOCUS ON PHARMA

DROPLESS PROCEDURE REDEFINES CATARACT SURGERY

Intraoperative injection of compounded formulation improves compliance.

BY Y. RALPH CHU, MD

Cataract surgery candidates face the prospect of a long and complicated postoperative topical medication regimen. The current convention is expensive and confusing, requiring patients to instill multiple eye drop prescriptions four or more times throughout the day for up to 6 weeks. This is no easy task. A recent study found that 92.6% of eye drop-naïve postcataract patients showed a poor instillation technique. Lack of compliance puts patients at increased risk of developing endophthalmitis and other postoperative complications. Until recently, this has been an inconvenient but acceptable fact, as there has been no other alternative.

As a surgeon committed to providing patient-centered care, I believe one of the most significant recent developments in ophthalmology is the introduction of compounded formulations of antibiotics and steroids for intraocular administration. Tri-Moxi and Tri-Moxi-Vanc (Imprimis Pharmaceuticals) are proprietary compounded formulations of triamcinolone acetonide and moxifloxacin HCl (with and without vancomycin), which are injected directly into the vitreous at the time of cataract surgery.

Intraocular delivery of these medications can help patients and their doctors by providing a solution to the problem of patient noncompliance after surgery.

RAPID ADOPTION

I implemented intravitreal Tri-Moxi in August 2014 and continued to prescribe a traditional drop regimen for patients until I perfected my technique. Very soon I discontinued prescribing the multidrop regimen and increased the number of patients given the injection.

A review of early data indicating no endophthalmitis and low incidence of anterior chamber inflammation and cystoid macular edema (CME) encouraged me to broaden the indications further. I now comfortably use the compound in patients with sulfa allergy and patients undergoing a glaucoma treatment or iStent (Glaukos) implantation in conjunction with cataract surgery.

Although I have not gone completely dropless, I do prescribe fewer drops. My practice is to include some topical medication because I like the idea of complete coverage with antibiotics on the eye as well as in the eye. Preoperatively the eye is prepped with povidone-iodine, intraoperatively I place Tri-Moxi inside the eye, and surgery is concluded with another drop of povidone-iodine in the eye. Patients are prescribed a combination steroid-antibiotic drop, with easy “one drop, twice daily” postop instructions.

I rather easily adapted my surgical procedure to include the transzonular injection (Figures). Having the right equipment is important when starting out. I prefer a short-nosed, short-bend cannula (Knolle 27 gauge, 4-mm bend), which allows me to safely go around and under the iris, over the capsular bag, and through the zonules.

PATIENTS HAVE A CHOICE

During the preoperative process, I offer patients the option to receive the intraocular injection. I explain that most of the time it will significantly reduce the
need for postoperative drops; I do not tell patients they will not need any drops because there is a 5% risk of some rebound inflammation.\(^2\) Patients complete a consent form that informs them that Tri-Moxi is formulated specifically for each individual patient in a Pharmacy Compounding Accreditation Board-accredited compounding pharmacy and is not a Food and Drug Administration-approved product.

I also discuss the possibility of visual floaters postoperatively, and I explain that these dissipate with time. Although patients experience floaters, it rarely impedes their vision. More commonly, they experience clearer corneas with the intraocular injection because of the intense antiinflammatory effect the steroid has on the corneal endothelium, helping it to recover more quickly postoperatively.

As long as patients know what to expect, they are comfortable afterward. Nearly all of our patients choose to go ahead with the injection.

**THE RIGHT THING TO DO**

I do not charge patients for the injection because the benefits to both the patient and my practice far outweigh the cost. Quite simply, this is a win-win situation.

The intraoperative application makes sense; for instance, if a patient gets CME that is not responsive to topical meds, we would send him or her to a retinal specialist who would then inject medication around or inside the eye.

I know that my patients receive a high-quality antibiotic and avoid the hassle of a costly and complicated drop regimen. For some patients, particularly those in assisted-living facilities who are charged for every drop placed in their eye by an attendant, this adds up to substantial cost savings.

An indirect benefit I have noted is a drastic reduction in the number of phone calls from pharmacies and insurance companies regarding drug substitution and coverage and inquiries from patients needing clarification or assurance about their at-home regimen. This has lifted a huge work burden from my employees.

Finally, my patients are genuinely excited about this new regimen, and they are telling their friends about it.


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