Controlling Perioperative Inflammation

BY RANDY J. EPSTEIN, MD; DAVID R. HARDTEN, MD; JOHN A. HOVANESIAN, MD; KEITH LIANG, MD; AND MITCHELL C. SHULTZ, MD

What is your regimen for controlling inflammation perioperatively for routine cataract surgery, LASIK, and PRK?

RANDY J. EPSTEIN, MD

For PRK, I use generic diclofenac q.i.d. for 4 days postoperatively and then ask patients to discontinue the drug. I also use prednisolone acetate 1% q.i.d. for the first month postoperatively and then taper patients' dosage according to their clinical response; I continue the drug if patients underrespond or have haze. In a high-risk situation, such as a patient with prior corneal or refractive surgery, penetrating keratoplasty, etc., I use difluprednate ophthalmic emulsion (Durezol; Alcon Laboratories, Inc.) instead of generic prednisolone and then taper the dosage. For routine LASIK cases, I do not use nonsteroidal anti-inflammatory drugs (NSAIDs). Rather, I prescribe prednisolone 1% q.i.d. for 1 week postoperatively and then ask patients to discontinue their use of the drug

For routine cataract surgery, I use generic diclofenac and generic prednisolone acetate 1% q.i.d. for 4 days preoperatively and for the first week postoperatively. After 1 week postoperatively, the dosing frequency of both drugs is reduced to b.i.d. for 3 weeks, after which they are discontinued. I use difluprednate instead of generic prednisolone in patients with a history of uveitis, when surgery on the other eye was problematic, or for a complex case. In a perfect world, I would prescribe difluprednate for all of my patients, but many of them complain about its cost. I insist on its use in high-risk situations, but otherwise, I use it whenever I am able to do so.

DAVID R. HARDTEN, MD

Fortunately in 2012, most patients experience minimal inflammation after cataract and refractive surgery. For cataract surgery on most patients, I use a topical steroid and a topical NSAID for 3 to 4 weeks postoperatively. I find that the balance of potency and safety of prednisolone acetate (Pred Forte; Allergan, Inc.) and ketorolac (Acuvail, Allergan, Inc.) works well. I start patients on these drugs q.i.d. for 1 week and then b.i.d. for 2 to 3 additional weeks. I use the drops for almost 2 months in patients who have retinal disease such as diabetes, who have a preexisting epiretinal membrane, or who have had a vitrectomy. In refractive surgery, I use fluorometholone 0.1% (Flucon; Alcon Laboratories, Inc.) q.i.d. for 2 weeks in LASIK patients and taper the drug slowly over 2 to 3 months for PRK patients. I only prescribe NSAIDs for a couple of days postoperatively to control pain in patients who have undergone PRK.

"I use difluprednate instead of generic prednisolone in patients with a history of uveitis, when surgery on the other eye was problematic, or for a complex case."
—Randy J. Epstein, MD

JOHN A. HOVANESIAN, MD

To control inflammation after cataract surgery, I use Pred Forte (brand name only) q.i.d. for 3 weeks postoperatively followed by t.i.d. for 1 week. I also prescribe bromfenac q.d. for 3 weeks postoperatively. After LASIK, I have my patients use one drop of prednisolone acetate every hour while they are awake for 1 day, and they continue the medication q.i.d. for 6 more days. I also prescribe bromfenac q.d. for 1 week as needed for comfort. For PRK, I use prednisolone acetate q.i.d. for 1 month postoperatively and bromfenac q.d. for 1 week postoperatively.

KEITH LIANG, MD

I start my patients on bromfenac q.d. and moxifloxacin 0.5% (Vigamox; Alcon Laboratories, Inc.) t.i.d. 2 days prior to cataract surgery. I add difluprednate t.i.d. to this regimen on the day of surgery postoperatively. I contin-

ue this regimen until patients use up 1.7 mL bromfenac and 3 mL moxifloxacin. I taper the difluprednate at 3 weeks postoperatively, so patients refill the prescription once.

For LASIK, I ask my patients to perform lid scrubs b.i.d. 2 days before surgery, use preservative-free artificial tears q.i.d., and take oral 1,000 mg fish oil. I start patients on loteprednol (Lotemax; Bausch + Lomb) q.i.d., gatifloxacin (Zymar; Allergan, Inc.) q.i.d., and bromfenac q.d. immediately after the procedure. I continue the gatifloxacin and bromfenac for 1 week. I taper the loteprednol 1 week postoperatively. My regimen for PRK is the same, except that I ask patients to take 2,000 mg vitamin C preoperatively starting 1 week prior to surgery and for 3 months postoperatively.

MITCHELL C. SHULTZ, MD

For routine cataract surgery, I control inflammation perioperatively with one drop of bromfenac daily, which is started 1 day prior to surgery and continued for 6 weeks postoperatively. For patients whom I consider to be at high risk, such as those with diabetes or preexisting epiretinal membranes, I start difluprednate b.i.d. 1 week prior to surgery and then add bromfenac 1 day before surgery. I increase the dosing frequency of difluprednate postoperatively to q.i.d. for 1 week and then reduce it to b.i.d. I continue my patients on bromfenac and difluprednate for 12 weeks postoperatively to reduce the risk of rebound inflammation and cystoid macular edema.

On the day of cataract surgery, all patients receive a preoperative slurry that consists of lidocaine 3.5% gel, bromfenac 0.09%, cyclopentolate 1% (Cyclogyl; Alcon Laboratories, Inc.), phenylephrine hydrochloride ophthalmic solution 2.5% (Neosynephrine; Sanofi-Synthelabo, Inc.), and ciprofloxacin. The patient's lids are taped closed until he or she is brought to the OR. Immediately after surgery, I give patients difluprednate and bromfenac.

For PRK, I start bromfenac q.d. 3 days prior to surgery and continue it for 5 days postoperatively. I find that this regimen has eliminated patients' complaints of postoperative pain, which I used to hear with other NSAIDs. I also use prednisolone 1% q.i.d. for 2 weeks postoperatively and then titrate to b.i.d. for 1 month. If the patient experiences haze, I continue the prednisolone b.i.d. for an additional 2 to 6 months (and monitor the IOP) to reduce the chance of regression.

With regard to LASIK, I find that a single intraoperative drop of bromfenac helps reduce foreign body sensation postoperatively. Patients then use prednisolone 1% q.i.d. for 2 weeks. ■

Section Editor John F. Doane, MD, is in private practice with Discover Vision Centers in Kansas City, Missouri, and he is a clinical assistant professor with the Department of Ophthalmology, Kansas University Medical Center in Kansas City, Kansas. Dr. Doane may be reached at (816) 478-1230; jdoane@discovervision.com.

Randy J. Epstein, MD, is a professor of ophthalmology at Rush University Medical Center in Chicago. He is an ad hoc consultant to Alcon Laboratories, Inc. Dr. Epstein may be reached at (847) 432-6010; repstein@chicagocornea.com.

David R. Hardten, MD, is the director of refractive surgery at Minnesota Eye Consultants in Minneapolis. He has performed research, speaking and/or consulting for Abbott Medical Optics Inc., Alcon Laboratories, Inc., Allergan, Inc., Bausch + Lomb, and Ista Pharmaceuticals, Inc. Dr. Hardten may be reached at (612) 813-3632; drhardten@mneye.com.

John A. Hovanesian, MD, is in private practice at Harvard Eye Associates in Laguna Beach, California, and is a clinical instructor at the Jules Stein Eye Institute, University of California, Los Angeles. He is a consultant to Allergan, Inc., Bausch + Lomb, and Ista Pharmaceuticals, Inc. Dr. Hovanesian may be reached at (949) 951-2020; drhovanesian@harvardeye.com.

Keith Liang, MD, is the medical director at the Keith Liang, MD, Center for Sight in Sacramento, California. He acknowledged no financial interest in the products or companies he mentioned. Dr. Liang may be reached at (916) 446-2020; kliang@liangvision.com.

Mitchell C. Shultz, MD, is in private practice and is an assistant clinical professor at the Jules Stein Eye Institute, University of California, Los Angeles. He is a consultant to Allergan, Inc., and Ista Pharmaceuticals, Inc. Dr. Shultz may be reached at (818) 349-8300; izapeyes@gmail.com.

SHARE YOUR FEEDBACK

Would you like to comment on an author's article?
Do you have an article topic to suggest?
Do you wish to tell us how valuable
Cataract & Refractive Surgery Today
is to your practice?
We would love to hear from you. Please e-mail us at letters@bmctoday.com with any thoughts, feelings, or questions you have regarding this publication.