BECOMING A BELIEVER

Personal experience changed this cataract surgeon's perspective on phenylephrine and ketorolac injection.

BY KEITH A. WALTER, MD

Like many surgeons, I am a natural skeptic. I question early claims that a product is worthy of adoption unless my own experience proves them to be true, particularly when the product's components are familiar and its cost seems high.

In the pages of *CRST*'s April 2015 edition, I expressed my concerns about Omeros' newly marketed Omidria (phenylephrine and ketorolac injection) 1%/0.3%.[1] I was unconvinced of its value, even though it was the

- first and only FDA-approved product for intraocular use to prevent miosis and to reduce postoperative ocular pain
- first and only combination of an intraocular mydriatic and a nonsteroidal anti-inflammatory drug (NSAID)
- first and only NSAID FDA approved for intraocular delivery during ophthalmic surgery
- first and only preservative- and bisulfite-free product approved by the FDA for addition to ophthalmic irrigation solution

I doubted the clinical value of Omidria, and I was concerned that its adoption would negatively affect future reimbursement for ophthalmic procedures and health care costs in general.

What changed my mind? After using the product in approximately 150 cataract procedures to date, I now believe that it represents a significant advance over other intracameral products for cataract surgery. In my practice, reimbursement has been as promised for both government- and commercially insured patients, and Omeros recently expanded access to cataract patients regardless of insurance coverage with its new reimbursement program, OmidriAssure. In addition, my concerns about health care costs have abated for reasons I will discuss.

WHAT INSPIRED MY REEVALUATION?

My decision to try Omidria was influenced by respected colleagues' reports of less need for Malyugin Rings (MicroSurgical Technology); no need for other intracameral agents; full visualization of toric IOLs, even after the use of a femtosecond laser; more efficient operating days; and patients reporting less pain and improved satisfaction. All surgeons appreciate the value of pupillary dilation during the cataract procedure, but preemptively inhibiting miosis is clearly preferable. Despite extra precautions with patients known to have used α-blockers or with those whose contralateral eye presented procedural challenges, miosis remains unpredictable. Mechanical iris retraction

and operating through a small pupil can increase complication rates, the duration of surgery, and procedural cost.

In the phase 2 and 3 trials of Omidria, all patients received a standard topical mydriatic and anesthetic regimen preoperatively. In the full-factorial phase 2 clinical trial, Omidria was four to six times more effective than either phenylephrine or ketorolac alone at maintaining a pupillary diameter of at least 6 mm during the procedure (data on file with Omeros).

In the product's two pivotal phase 3 trials, the treated group demonstrated significantly better maintenance of mydriasis and prevention of miosis than did the control group. Omidria was sixfold better than the control at preventing pupillary diameters of less than 6 mm at the time of lens implantation. The product was seven- to 13-fold better at preventing pupillary diameters smaller than 4 mm and nine- to 27-fold better at preventing miosis of 2.5 mm or more, whether those endpoints were measured at the time of lens implantation or at any time during surgery. In both trials, at lens implantation, when visualization is particularly important, 96% of patients in the treated group had pupillary diameters of at least 6 mm compared to 77% in the control group. In one trial, only 1% of treated patients experienced a 2.5-mm or greater loss in pupillary diameter versus 27% in the control group, and in the other trial, the difference was 3% versus 28%. Across both trials, fewer than 1% of treated patients had pupillary diameters smaller than 4 mm versus more than 7% of control patients (data on file with Omeros).[2]

The reduction of postoperative pain was also striking. All treated and control patients received a standard topical anesthetic regimen preoperatively. In the pivotal trials, 50% more patients treated with Omidria had no pain at 10 to 12 hours postoperatively, the period when patients tend to be most uncomfortable,[3] and 50% fewer reported moderate to severe pain compared to patients in the control group. Yet, 40% more control patients than treated patients used oral analgesics on the day of surgery.[4]

These results are consistent with the well-characterized, complementary mechanisms of action of each of the components of Omidria. Phenylephrine, an α1-adrenergic receptor agonist, induces mydriasis by contracting the radial muscle of the iris. The NSAID ketorolac inhibits both cyclooxygenase-1 (COX-1) and COX-2 enzymes, shutting down prostaglandin synthesis to prevent surgically induced miosis and reduce postoperative pain.

The clinical performance of Omidria is likely the result of its preemptive action at the targeted enzymes and receptors: the product is delivered directly and continuously to the site of surgical trauma throughout the procedure. Topical preoperative medications can be washed out during surgery.[5] In contrast, in a canine study in which Omidria was used during conventional phacoemulsification and lens replacement surgery, ketorolac levels in the retina, vitreous, cornea, choroid, iris/ciliary body, anterior chamber, and anterior sclera were sufficient to ablate COX-1 and COX-2 for at least 10 hours postoperatively, the latest time point evaluated.[6,7]

AT A GLANCE

- Initially skeptical of the value of Omidria, the author explains why he decided to try out the product himself and why he now believes it represents an important advance in cataract surgery.
- Uncomplicated surgery, the absence of pain, and quiet eyes with clear corneas postoperatively summarize the product's clinical value for him.
- His financial concerns about the product have also abated.

MY EXPERIENCE

My experience with Omidria has been better than the clinical trial results and tracks the expected pharmacology. The clinical trial program excluded eyes with intraoperative floppy iris syndrome or pseudoexfoliation and femtosecond laser use for the purpose of design standardization. I have used the drug in patients with intraoperative floppy iris syndrome and pseudoexfoliation as well as in other complex and not complex cases, with and without the assistance of a laser. I have not yet needed a pupil-expanding device when using Omidria, even in patients who required such instrumentation during prior cataract surgery on their contralateral eye. I have also been able to stop using all other intracameral agents. My patients have been comfortable during and after surgery. Consistent with ketorolac's inhibition of prostaglandin synthesis in the cornea and other intraocular structures, I have observed minimal corneal edema and anterior chamber reaction postoperatively.

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FINANCIAL MATTERS

The Centers for Medicare & Medicaid Services awarded Omidria transitional pass-through payment status, allowing it to be paid for separately from the bundled facility payment for cataract surgery performed in an ambulatory surgery center or hospital outpatient department. Congress enacted this special arrangement with the express intent of removing economic barriers to the trial

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of innovative medical technologies. The funding for the entire pass-through program is part of an amount set aside annually. The dollars are there to be used; if they are not accessed by cataract surgeons, they will be tapped by other specialists, with any remaining funds not returned to health care but lost to the system.

The pass-through program is designed to be budget neutral to the health care system and represents a unique resource for clinicians. It has no impact, now or in the future, on physician fees for cataract surgery.[8] Once its pass-through status expires on December 31, 2017, Omidria will likely be added to the bundled facility fee for cataract surgery, resulting in an increase in the facility fee that directly correlates with the product's utilization during its pass-through period. In short, I have been able to try Omidria without affecting Medicare budgets, and by incorporating it into my surgical practice, I have helped support appropriate reimbursement for cataract surgery in the future.

Because of its pass-through status, Omidria is reimbursed by the Centers for Medicare & Medicaid Services at average selling price plus 6%. For cataract patients in hospital outpatient departments, there is no copayment. The 20% copayment for surgery performed in an ambulatory surgery center is covered by supplemental or secondary insurance carried by the vast majority of Medicare Part B beneficiaries. One hundred percent of Medicare Administrative Contractors cover Omidria, as do Medicare Advantage plans. The product has also received rapid and strong support from commercial payers and has confirmed coverage for 145 million of the 155 million lives insured by the top 30 US commercial plans, including Aetna, Cigna, Anthem/WellPoint, Humana, UnitedHealthcare, Coventry, Medica, and Kaiser Permanente. The American Association of Retired Persons, USAA, Tricare, and Blue Cross/Blue Shield regional carriers also cover the product. It is included on the Federal Supply Schedule and on 340B formularies, making it reimbursable regardless of surgical facility type. Omeros recently entered into an agreement with Apexus, the prime vendor for the 340B program, to offer Omidria to 340B-eligible institutions (ie, most academic institutions and others that treat indigent patients) at a sub-340B/subwholesale acquisition cost of approximately 30% below wholesale acquisition cost.

Of course, there are still some patients who, for one reason or another, fall into a coverage gap. OmidriAssure helps facilities navigate coverage issues and removes financial barriers for patients with inadequate insurance. In my experience, it is the most comprehensive reimbursement services program in ophthalmology. For example, under the equal access part of the program, financially eligible uninsured and government-insured patients can receive Omidria free of charge. For commercially insured patients, the manufacturer covers, on behalf of the patient, the difference between a facility's acquisition cost for Omidria and the amount covered by the patient's insurance.

I would add that replacing compounded products with Omidria eliminates a facility's costs for those compounded products. Perhaps more important, it avoids risks associated with mixture error and sterility as well as accreditation, FDA, and liability issues associated with their use.

CONCLUSION

I am convinced that Omidria represents an important advance in cataract surgery, but I do not doubt that some of my fellow cataract surgeons are skeptical of the product's value. Perhaps reading about my experience will inspire them to try it for themselves and draw their own conclusions. ■

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