

My 20/20 Cataract

Having cataract surgery made me realize the importance of quality of vision versus visual acuity.

BY CHARLES B. SLONIM, MD

I have been in ophthalmic practice for over 25 years, and more than half that time was spent performing cataract surgery. I was always a conservative cataract surgeon, generally waiting until a patient's visual acuity was 20/50 or worse before engaging in a serious discussion of the procedure. Even with the growing popularity of refractive lens exchange, I rarely, if ever, discussed cataract surgery with a patient whose Snellen visual acuity was 20/20 to 20/25.

Ironically, at 55 years of age and diagnosed with cataracts, I was my most difficult patient to counsel. I began noticing halos around streetlights at night and glare from bright light during the day about 4 years ago. Behind my 20/20+ visual acuity, I had been slowly developing bilateral anterior cortical cataracts. My right eye had always been dominant, but closing my left eye came to make me feel as if I had a piece of wax paper in front of everything in my sights. This obstruction became more opaque. I had all the classic nighttime symptoms of cataracts (halos, decreased contrast sensitivity), but they were not so bothersome that I considered extraction.

Eventually, I realized that my loss of contrast sensitivity and depth perception were slowing down my surgery, although not compromising its quality. The central blurriness and haziness in my right eye were rendering me almost monocular for my detailed microsurgery. I nevertheless resisted undergoing cataract surgery until last autumn. As I switched lanes while driving home from the office, I was blinded by glare when the sun shone between the edge of my sun visor and my rear-view mirror, just inside the frame of my windshield.

Upon deciding to proceed with cataract surgery and determined to be a good patient, I chose Stephen Updegraff, MD, as my surgeon. My experience was enlightening.

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PREOPERATIVE EXPERIENCE

I underwent multiple preoperative measurements with the Stratus OCT and IOLMaster (both from Carl Zeiss Meditec, Inc., Dublin, CA), specular microscopy, manual keratometry, the Pentacam Comprehensive Eye Scanner (Oculus, Inc., Lynnwood, WA), and water immersion biometry. My choice of a monofocal over a multifocal IOL was simple; my biggest problems preoperatively were glare and halos, so I did not want to risk having these side effects postoperatively. During recent ophthalmic meetings, I had stopped at every IOL manufacturer's booth to learn as much as possible about all of my options. Intrigued by the quality of vision offered by aspheric IOL technology, I chose the SoffPort AOV IOL (Bausch & Lomb, Rochester, NY).

I received my preoperative drops, moxifloxacin 0.5% (Vigamox; Alcon Laboratories, Inc., Fort Worth, TX) and ketorolac tromethamine 0.4% (Acular LS; Allergan, Inc., Irvine, CA), with instructions to begin using them 2 days prior to surgery. Most of the literature with which I was familiar linked drops 3 days before surgery with statistically significantly better postoperative results (ie, less risk of endophthalmitis, cystoid macular edema). I therefore decided to start instilling the drops 4 days before surgery.

SURGICAL EXPERIENCE

I arrived at 7 AM, and mine was the second case of the day. After a heparin lock was placed in my right wrist, I

asked for something to calm my nerves. Two milligrams of midazolam (Versed; Roche, Nutley, NJ) did the trick without compromising my ability to recall details of the surgery.

In the OR, I was asked to look straight up at the light. I saw two thick, gray, 3D half-circles that were slightly offset, separated by a space, and encased within a grayish light—similar to what one might see underwater. During the procedure, I concentrated on the sounds of the phaco machine, while trying to detect changes in my vision during emulsification and aspiration. Despite my efforts, I noticed no dramatic changes.

After the cataract was removed, I looked up in order to experience aphakic vision. Again, I saw no difference from the gray light I had seen previously. I now concentrated on what I was going to notice when the IOL was inserted. Would my vision clear significantly?

When Steve announced that the IOL was implanted, I was disappointed that I could perceive no difference from what I saw during surgery. When the procedure was complete, I looked around the room and noticed that my photoreceptors were still bleached out, but I was satisfied that I could see images and shadows in the room.

POSTOPERATIVE RECOVERY

Day of Surgery

The midazolam must have kicked in with its amnesic effect, because I cannot recall my time in the recovery room. The next memory I have is of the discharge area, where I could see the holding and recovery areas. Through my right eye, my surroundings were definitely bright. With my left eye closed, I could see everyone walking around, but the images in the distance were still blurry.

I looked at my identification bracelet and had a sharp, crisp view of my name. Internally, I gasped. I had the wrong implant power! I have been emmetropic my entire life, and I did not want to be myopic postoperatively. I considered whether to speak up or wait. I then remembered with some relief that, after clear corneal surgery, the resulting corneal edema typically induces a myopic shift. I would wait and see what happened as my recovery progressed.

As my wife drove me home, however, I became increasingly worried that I could see the name on my wristband far better than the cars on the road. Although I did not like the idea of postoperative myopia, the contrast between the colors that I saw was amazing. During the rest of the day, the quality of my vision improved dramatically, but my visual acuity was not what I had hoped for preoperatively.

I followed the regimens prescribed to me with slight modifications (see *Postoperative Drug Regimen*), put on my eye shield, and went to bed.

Postoperative Day 1

My near vision remained sharp, but my distance vision was slightly blurrier, possibly because of overnight, hypoxia-induced corneal swelling. By the afternoon of the first postoperative day, the view through my right eye was better than I could ever recall its being.

At the first postoperative visit, my UCVA was 20/25 OD, the IOP was 19 mm Hg, and cells were 1+. Although my acuity had not changed from my 20/20 preoperative vision, the quality of vision and contrast sensitivity of my right eye were amazing, and I was no longer myopic postoperatively. The vision in my right eye was so clear that I could now detect the “wax paper” vision of my left eye.

POSTOPERATIVE DRUG REGIMEN

AS PRESCRIBED

- Vigamox (Alcon Laboratories, Inc., Fort Worth, TX) t.i.d.
- Pred Forte (Allergan, Inc., Irvine, CA) q2h as needed for first 2 days, then q.i.d. for 1 week, then tapered weekly

MY MODIFICATIONS

- Quixin (Santen, Inc., Napa, CA) q.i.d. for 1 week
- Lotemax (Bausch & Lomb, Rochester, NY) q2h for the first week, then q.i.d. for 1 week, then tapered weekly
- Nevanac (Alcon Laboratories, Inc.) t.i.d. for 5 weeks

RATIONALE

The moxifloxacin drops stang, so I switched to levofloxacin 0.5% (Quixin) four times a day. I was given a sample of prednisolone acetate (Pred Forte) drops to be used every 2 hours, so I decided to use them every hour for the rest of the day of surgery based on the idea that more is better. The white suspension residue caused a foreign body sensation, and the occasional white strands from my eye were bothersome. Starting on the first postoperative day, I switched to loteprednol etabonate (Lotemax) simply because of personal preference.

Although there was no mention of an NSAID drop postoperatively, my fear of cystoid macular edema prompted me to use one. I therefore decided to add nepafenac 0.1% (Nevanac) to my postoperative regimen.

Postoperative Day 2 and Beyond

I had a full day of surgery scheduled. The overhead lights were so bright that I had them turned down two levels. Instead of producing photophobia, the lights just seemed brighter without the cataract. During the one case for which I used my headlight, the halogen beam shone brighter than I could recall. The skin closures went quickly, and I finished earlier than scheduled.

On the fourth postoperative night, every point source of light (ie, street lights, red tail lights, oncoming headlights) had two sharply defined streaks coming off it at 60° and opposite at 240° angles. I wondered if the problem was a newly acquired astigmatism, a shift in the lens implant, or even a wrinkle in my posterior capsule perpendicular to the haptics of the implant. I chose to wait before panicking; after all, that is how I would have counseled my patients. The images remained until the seventh night, when they diminished. By the eighth night, the streaks were gone.

At the 1-week postoperative visit, my UCVA was 20/15, the IOP was 19 mm Hg, and only trace cells were present.

NEW PERSPECTIVE

I recently saw a patient who is 75 years of age and whom I have followed for more than 25 years. Ten years ago, she began developing cataracts. Last year, she saw 20/40 OU with +2 to +3 nuclear sclerotic cataracts (+2 brunescence). At that visit, I documented how surprised I was that she could see as well as she did with her cataracts. During her recent visit, her vision was 20/50 in one eye and 20/60 in the other eye, but she claimed to have no visual complaints. I noted an increase in brunescence and opalescence (up by +1).

My new perspective on the benefits of cataract surgery made our doctor/patient discussion different from any other I have had in the last 10 years. I did not merely suggest but rather insisted that surgery was her best option. ■

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