

CATARACT

Wrong Eye/Wrong Lens: How To Avoid Surgical Mistakes

BY MIRIAM KARMEL, CONTRIBUTING WRITER

Early in his career, Stephen S. Lane, MD, placed the wrong intraocular lens into a patient's eye. The error occurred in an operating room where the routine was to stack lenses according to the day's surgical scheduling order. On that day the second patient on the written schedule was late in arriving. To save time, the third patient on the schedule became the second, and the wrong IOL was implanted. Fortunately, Dr. Lane recognized the error and exchanged the lens before the patient left the operating room, but the practice of lens-stacking ended. "We totally changed that practice," Dr. Lane said, "though it seemed like a good idea at the time."

Some mistakes, said Dr. Lane, may be unavoidable. But others, like that

IOL mix-up, don't have to happen. "Operating on the wrong eye is totally avoidable, and so, too, is putting the wrong IOL in a patient's eye," said Dr. Lane, who chaired the Academy's Wrong Site/Wrong IOL Task Force, and is in private practice in Stillwater, Minn. "We should have a goal of zero for mistakes like these that are avoidable." To that end, the task force issued a set of recommendations this year, which includes a pre- and perioperative checklist. (See "For More Information.")

The Academy has addressed the issue before, most recently in 2005. This time, however, it's delivering a zero tolerance message to physicians, and delivering it with a greater sense of urgency, in part due to pressure from the Joint Commission, as well as

from some state medical boards, said Richard L. Abbott, MD, professor of ophthalmology at the University of California, San Francisco, and chairman of the board of the Ophthalmic Mutual Insurance Company.

Dr. Lane said the new recommendations are more like guidelines than rules. If doctors aren't incorporating many of these safety measures into their procedures, and they see potential problems with what they're doing, then they can adopt some of these guidelines before something unwelcome happens, he said.

Eye M.D.s don't get into trouble often. Between 1987 and 2008, about 220 cases of cataract surgery mistakes were filed with OMIC, and about 80 percent of those involved wrong power, wrong measurement or wrong IOL implanta-

Tips From Cataract Experts on Avoiding Errors



DR. LANE: We print out a treatment sheet that includes all of the patient's IOL calculations. A photocopy of that sheet is secured to the lens implant box with a rubber band and placed in a bin in the operating room. When the patient enters the operating room, I select the lens with the patient's name on it

and check it against the treatment sheet that's wrapped around the box. The information is also verified by the circulating nurse and then again before the lens is implanted.

DR. HENDERSON: At Tufts New England Medical Center, the surgeon must write



his or her initials in surgical marker near the appropriate eye before the patient is given a peribulbar injection. Also, every team member who is in contact with the patient, both in the preoperative area and in the operating room, must ask the patient to identify the correct eye. Then there's a final timeout when the surgical nurse confirms the type of surgery, which eye and the power of the intended lens.

DR. MILLER: Be sure the designated primary lens never leaves its box until it's time for implantation. To avoid confusion, have the backup lens available, but don't bring it into the operating room. And, finally, the circulating nurse should verbally confirm with the physician that they're using the correct lens.



tion. These are a miniscule fraction of the tens of millions of cataract surgeries performed over the same period.

The authors of a review of 106 cases (about half reported from OMIC) agreed that surgical confusions occur infrequently.¹ But the consequences of those confusions “for the patient, the physician and the profession may be serious,” the authors write. The study concluded that the use of the Joint Commission’s “Universal Protocol for Preventing Wrong Site, Wrong Procedure and Wrong Person Surgery,” would have prevented confusion in 85 percent of the cases reviewed.

The Academy’s position is that even one mistake is one too many. “Although rare, if it happens to your patient, it’s 100 percent for that individual,” Dr. Abbott said. “It’s like the incidence of endophthalmitis. It’s also really rare, but when it happens it’s devastating.”

How Mistakes Happen

The surgical confusion study cited above found that wrong-lens implants accounted for 63 percent of the cases under review. Wrong-eye or wrong-patient operations were less common.

Which eye? Bonnie A. Henderson, MD, assistant clinical professor of ophthalmology at Harvard University, said, “In ophthalmology it’s hard to confuse which eye is having surgery because of the use of preoperative drops. The patient usually knows which eye gets the drops, and the dilated eye is obvious to the surgical team.” But she noted that institutions use various methods to mark the brow or eye with surgical marker and verbally confirm the surgical site with the patient.

Which lens? It’s easier to implant a lens with the wrong correction, Dr. Henderson said, and it’s happened to her. She recalled a case in which the etiology of the patient’s refractive error wasn’t clear. After repeating the measurements, the mystery remained until the patient mentioned that she had worn contact lenses when the technician took the initial preop measurements.

Similar measurement snafus, like

improper axial length and keratometry measurements, are a common cause of mistakes and will lead to the wrong IOL power, Dr. Henderson said. To eliminate such errors she advised training staff to be alert for an unusual measurement.

Then there are errors of a clerical nature. At some point during the process, the person filling the order misreads the number or simply fills the wrong order. To avoid such errors, Dr. Henderson recommended relying on the printout of the IOL Master or A-scan IOL power worksheet for ordering the lens. Finally, if the lens order is handwritten and the physician’s writing is illegible, the order should be typed. At the very least, Dr. Henderson advised writing the numerical power in digits, then spelling it out, as done on a check.

Which patient? Sometimes, though, the right lens is ordered but placed in the wrong patient. That’s why Kevin M. Miller, MD, places the lens designated for implantation into a yellow box. “Once the lens goes into the box, it does not come out until it goes into the patient’s eye,” said Dr. Miller, who is professor of ophthalmology at the University of California, Los Angeles. “Nobody in the OR is allowed to remove the lenses from the yellow box until I ask for them at the time of implantation. When I say, ‘Open up the lens implant,’ the nurse reads the model and power to me, and I say ‘yes’ to verify that’s the one I want.”

Protocols of Preemption

Despite his strict adherence to this system, Dr. Miller wondered if some wrong-site surgery protocols may be carried to an extreme, especially in settings where there’s never been a mix-up. “For us at UCLA, it’s a non-issue,” he said, noting that in the department’s 40 years, there’s never been a wrong-site cataract surgery.

Yet three or four years ago, UCLA surgeons were required to have a time-out immediately before surgery to confirm the patient’s name, date of birth and correct eye. Dr. Miller said it’s a burden to repeatedly ask the patient to

confirm his or her name and the eye. “By the time they’ve been asked the fifth time, they start to get frustrated and nervous, as if the staff doesn’t know what’s going on.” He added that the more recent practice of airing anticipated problems in front of the patient might instill unnecessary fear. “The last thing a patient wants to hear is all the bad stuff that might happen.”

“A lot of this is redundant—constantly repeating ourselves,” Dr. Henderson agreed. But she defended the practice, “especially in high-volume, busy surgical centers, where many surgeries are performed in a short period of time.” To avoid upsetting the patient, she said, the OR nurses where she operates are taught to say, “I know you’ve been asked many times, and we already know which eye we’re operating on, but to follow guidelines I have to ask again.”

Use a checklist. The bottom line is that doctors, like airplane pilots, need a flight checklist, Dr. Lane said. “Whether it’s a time-out or ‘a pause for the cause,’ there needs to be some process to ensure that everything is being done to avoid wrong-site surgery.”

And if mistakes do happen, “honesty is always the best policy,” Dr. Henderson said. “It’s important to be honest with the patient and tell them what happened and why. Be apologetic. And let them know you will take care of them and will stick with them.”

Finally, you never want to put blame on anyone else, Dr. Henderson said. “Explain as clearly and honestly as possible what happened and what the solution is. And give them hope that this situation can be remedied.”

¹ *Arch Ophthalmol* 2007;125(11):1515–1522.

For More Information

The Academy’s wrong site/wrong lens prevention guidelines can be found polybagged with this *EyeNet* and at <http://one.aaio.org/WSWIOL>, and the Joint Commission’s protocol is available at www.jointcommission.org/PatientSafety/UniversalProtocol.