I have worked in the Department of Ophthalmology at the Medical University of Graz, Austria, since 1978. In that time, our ophthalmologists have treated more than 500,000 patients. We perform about 3,600 cataract surgeries annually. Surgery is free because almost 99% of patients have basic health insurance, and the government determines the monthly premium. Between 10% and 15% of citizens have additional private insurance, which improves the quality of accommodations and gives individuals the right to choose a surgeon. Sixty percent of patients stay in the hospital for 1 night after cataract surgery, and 40% of procedures are outpatient.

When I was trained, cataract surgery was performed by intracapsular cryoextraction, and this technique was replaced by extracapsular cataract extraction and then by phacoemulsification. During the past 25 years, I have performed about 20,000 cataract surgeries. In Austria, residents are not required to learn how to perform cataract surgery, and a resident gains knowledge about the procedure by assisting surgeons in the operating theater. This article shares 10 pearls for improving cataract outcomes and improving workflow based on my experience of the past 34 years.

IMPROVING OUTCOMES

No. 1: Clean the eyelids and eyelashes. Before surgery, I recommend administering several drops of povidone iodine 5% into the conjunctival cul-de-sac. The patient should then close his or her eyes. Next, the eyelids and eyelashes are cleaned with povidone iodine 10% three times with cotton swabs. Then wait for 5 minutes before draping the patient (Figure 1).

No. 2: Meticulous draping is important. The eyelashes from the lower and upper eyelids should be covered completely by the drape. If the first attempt is not successful, we take a new drape and do it again (Figure 2).

No. 3: A well-designed architecture of the clear corneal incision, very close to the limbus, is essential. It is apparent that the tunnel was perfectly executed when, at the end of the surgery, the eye is filled and the tunnel is watertight without the need for wound hydration. Do not overstretch a 2.5-mm tunnel by using a 2.8-mm cartridge for IOL implantation.

No. 4: Use preloaded IOLs. Preloaded IOLs are timesavers. They are always folded in the proper way, and there is no danger of damage or contamination during the folding process.

Figure 1. Cleaning the eyelids preoperatively three times with povidone iodine is essential for reducing the infectious flora. Wait for 5 minutes before draping.
No. 5: Pay close attention to complications. At the end of each year, we generate complication rates from our surgical database for quality assessment. We specifically look for the number of posterior capsular ruptures combined with vitrectomy and the causes and discuss those cases with the operating surgeons. When we teach residents cataract surgery, we use a risk schedule, assigning points for each difficulty or challenge with a particular case (eg, small pupil, pseudoexfoliation, use of alpha-antagonists with probability of intraoperative floppy iris syndrome, red-brown hard nucleus, high myopia, posttraumatic cataract with loose zonules, old age). We do this to get good results and to avoid overstressing the beginning surgeon.

Postoperative endophthalmitis and toxic anterior segment syndrome are dramatic complications that require immediate careful investigation to identify possible causes.

No. 6: Check for infectious disease. Before surgery, check both eyes of all patients at the slit lamp for conjunctivitis or acute meibomitis. If an infectious disease is detected, cancel the surgery.

No. 7: Marking the operative eye is essential to avoiding wrong-site surgery. Our patients wear a transparent plastic bracelet with their full name and birthday on it. We mark an R or L on the bracelet with a water-resistant pen. The patient is fully conscious when he or she is given the bracelet and agrees again to the final choice of the operative eye, which was discussed weeks before when he or she gave informed consent (Figure 3).

No. 8: Be aware if your patient as an allergy. If a patient has an allergy, we give him or her a second, red bracelet so that the staff is cautious and knows to ask what kind of allergy exists before administering eye drops and intraocular or intravenous drugs (Figure 3).

No. 9: Discuss and choose the dioptic power of the implant before surgery. In the case of a highly myopic or hyperopic eye, the lens might not be in stock. If a toric lens is to be implanted, the cornea is marked with a blue pen with the patient in a seated position at the slit lamp.

No. 10: Consider using cataract packs. The use of cataract packs has tremendously reduced our nurses’ workload. These sets include almost everything that is needed for surgery. As a result, the preparation time between surgeries is dramatically shortened. Many of the instruments, especially those with tubes, such as cannulas and an I/A set, are single-use and do not have to be cleaned.

CONCLUSION

Some of the above pearls are commonsense and may not shine brilliantly for many of you, but the structures of local health and university systems do not often facilitate the implementation of new ideas. Under such circumstances, progress is sometimes slow. The rate of satisfaction (and many times happiness) is high among our patients.

Christoph W. Faschinger, MD, PhD, practices in the Department of Ophthalmology, Medical University of Graz, Austria. Dr. Faschinger states that he has no financial interest in the material presented. He may be reached at tel: +43 316 385 12899; e-mail: christoph.faschinger@medunigraz.at.

TAKE-HOME MESSAGE

• There should be a span of approximately 5 minutes between cleaning the eyelids and draping.
• Before surgery, check both eyes for conjunctivitis or acute meibomitis, canceling the surgery if an infection is found.
• The use of cataract packs and preloaded IOLs saves time in the operating room.