THE DOCTOR-PATIENT RELATIONSHIP, THE KEYSTONE OF MEDICAL CARE, AND THE FOUNDATION OF PREDICTABLE OUTCOMES IN CATARACT SURGERIES

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The past 3 decades have seen rapid developments in cataract surgery. The procedure has gone from the simple removal of an opacified natural lens to one that can provide spectacle independence and aims to restore, if not improve, overall visual outcomes. The advances in the procedure coincide with breakthroughs in technology wherein surgeons have a wide array of instruments and devices that aid in providing better surgical outcomes, and in which patients have access to health trends at the tips of their fingers. However, amidst all of these improvements, the doctor-patient relationship has remained constant as the foundation of care.[1,2]

The relationship between the doctor and patient is a vital element of medicine. Although patients are more involved in their health and wellness decisions, they still consent to their surgeries with the utmost trust that their surgeons will perform the procedure safely and efficiently while delivering the desired outcomes.

In cataract surgery, the intraocular lens (IOL) is the only device which remains in the patient's eye. Accordingly, the importance of implanting the IOL with the correct power (i.e., sphere and/or cylinder) in its precise position (i.e., axis in some cases) is essential to the success of the procedure and to the preservation of the trust inherent to the doctor-patient relationship.[2]

Let's use patients with astigmatism as an example. These patients wish to be less dependent on spectacles after surgery. Accordingly, I use the ORA SYSTEM Technology (Alcon) intraoperative wavefront aberrometer, which provides real-time information on IOL spherical and cylinder power calculations through aphakic measurements and axis orientation through pseudophakic measurements.[3,4] More importantly, during the aphakic

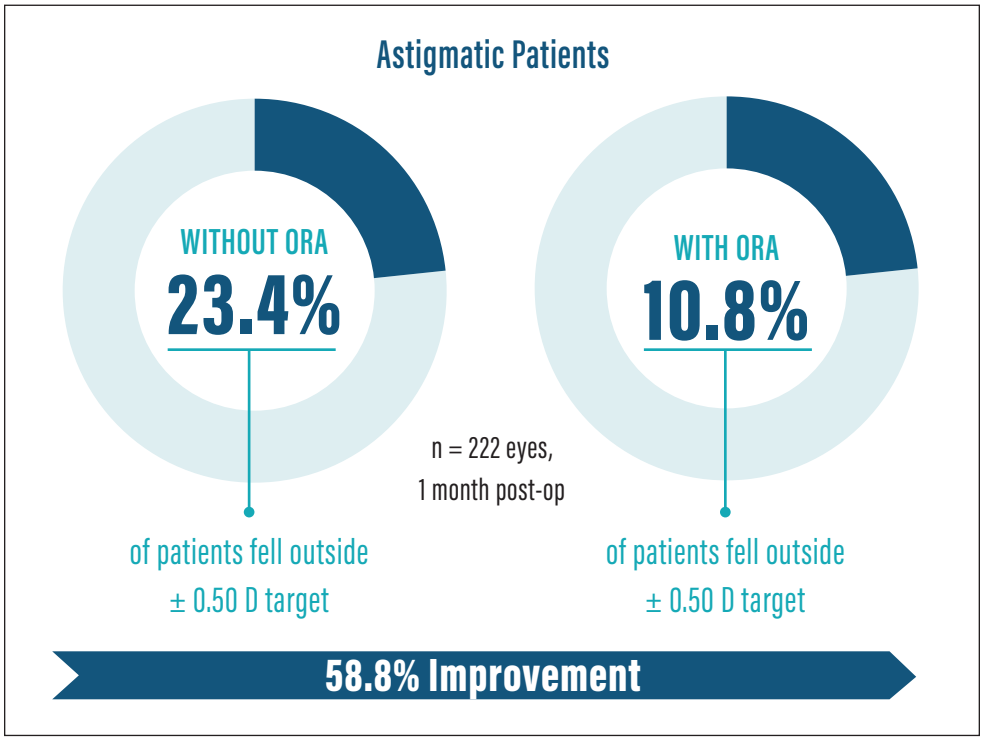

Figure 1. The ORA System Technology empowers the surgeon to achieve predictable postoperative refractive outcomes that are unique to each patient's visual needs.

phase, the ORA SYSTEM is able to measure the total refractive astigmatism, which accounts for both anterior and posterior curvatures of the cornea. Given that the cornea contributes 66% of the eye's refractive power,[5] this measurement is very important in eyes that have been planned for toric IOL implantation, as well as eyes that have a history of keratorefractive procedures.[6,7] One could suggest that newer biometers and IOL calculation formulas may obviate the need for intraoperative aberrometry, however even if the most advanced biometer and the latest generation IOL calculation formulas are used to preoperatively determine the IOL power (sphere and cylinder), the lens power that is derived remains an estimate (due to these formulas making assumptions based on population averages) that can only be validated during or after surgery.

In a prospective, randomized, observer-masked, contralateral eye comparison study, the percentage of eyes with astigmatism of ≤ 0.50 D at the 1-month follow-up was higher in the intraoperative aberrometry group compared to the control group in which eyes were implanted with IOLs based on standard preoperative methods alone (89.2% vs 76.6%; $P = .006$; n = 222 eyes). Furthermore, the mean postoperative refractive astigmatism was lower in the intraoperative aberrometry group compared to control group (0.29 ± 0.28 D vs 0.36 ± 0.35 D; $P = .041$).[8]

I have relied on the ORA SYSTEM to validate data used in preoperative IOL calculations through intraoperative, real-time, aphakic measurements. Furthermore, I have learned to depend on the ORA SYSTEM to verify both the spherical and cylindrical power of the toric IOL that I need to implant in each of my patients' eyes. In the final analysis, the ORA SYSTEM empowers me to achieve predictable postoperative refractive outcomes that are unique to each of my patients' visual needs and allow me to maintain valuable doctor-patient relationships.[2] ■

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