

Transforming Ophthalmology

The introduction of refractive surgery IOLs will change the way we practice our specialty.

BY ERIC D. DONNENFELD, MD

During the 20 years that I have been privileged to be an ophthalmologist, I was fortunate to observe innovations and changes in the way we practice our specialty. These changes revolutionized the care we provide for patients and have given us the opportunity to change their lives. I have seen this transformation firsthand and believe there have been two major revolutions in anterior segment surgery that have superseded all of the other innovations.

When I entered my residency at Manhattan Eye, Ear & Throat Hospital in 1981, almost all of the ophthalmologists were performing aphakic intracapsular surgery. A few aggressive souls were implanting iris clip IOLs. By the time I left my residency, everyone was doing extracapsular cataract extraction with PCIOLs, and a few surgeons were performing phacoemulsification. The transition from aphakia to pseudophakia with a PCIOL gave patients rapid visual rehabilitation with quality vision. Additionally, this change transformed cataract surgery from a procedure that patients feared and avoided until they had significant visual disability and to one they welcomed as a way to restore their vision.

The advent of corneal refractive surgery occurred approximately 10 years later. I had participated in radial keratotomy as part of the Prospective Evaluation of Radial Keratotomy study¹ during my fellowship at Wills Eye Hospital in Philadelphia. However, it was the excimer laser—its promise of refractive surgery with safety, efficacy, and quality of vision—that really brought this type of surgery into the mainstream. During the last 10 years, I have watched LASIK and PRK grow into extraordinary procedures.

THE NEXT REVOLUTION

Refractive IOLs

The next transformation to the practice of ophthalmology is refractive IOLs. During the next couple of years, this innovation will snowball into a technology that promises to change the way we practice ophthalmology.

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“Refractive IOLs are amazing devices that are going to offer patients the ability to have their eyes rehabilitated for distance, reading, and intermediate vision.”

tance, reading, and intermediate vision. Although the true promise of refractive surgery has not been available to presbyopes via conventional surgery, the situation is changing. During the next several years, we are going to see a logarithmic increase in the implantation of multifocal, accommodative, and phakic IOLs.

Refractive IOLs remind me of a story that my grandfather used to tell me when I was growing up. He had taken over his father's small coal company on the Lower East Side of Manhattan and turned it into the largest coal company in New York City. He did that by following one simple motto, which was always to give his customers more than they asked for. He did not merely satisfy them, but exceeded their expectations. He would go into a new apartment building and speak with the superintendent. He would tell him that Donnenfeld coal burnt longer than any coal available. When he delivered the 5 tons of coal, it would burn longer and better than any coal they had ever received in the past. My grandfather delivered 6 rather than 5 tons of coal, and, of course, by doing this, he exceeded his customers' expectations.

The same can be said for refractive IOLs. They have the potential to deliver more than patients expect—the opportunity to be spectacle free for the rest of their lives with quality vision, stereopsis, and depth perception.

Of course, there are going to be some bumps along the way, and we hope to discuss them on a regular basis in this column. There are flaws that need to be worked out, and the technology is certainly going to improve. Most importantly, we are going to have to alter the way we practice ophthalmology. These changes in technology and practice management will be among the regular highlights of this

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column. We plan to feature some of the major innovators in cataract and refractive surgery, and we hope that this column will become one of your regular stops in your monthly reading of *Cataract & Refractive Surgery Today*.

For now, my suggestion is that you start thinking about whether this new technology, refractive IOLs, is something that you want to consider. If you are interested, there are some simple things you need to do.

Cataract Surgeons

For those of you who are cataract surgeons, you already perform expert cataract surgery and have patients who are candidates for these multifocal IOLs. You are going to have to learn how to perform LASIK, PRK, limbal relaxing incisions, and maybe even conductive keratoplasty. You will have to learn how to charge patients for your services, deal with more demanding patients, and be willing and able to perform enhancement surgery for minor refractive errors. If not, you may want to partner with an experienced refractive surgeon.

Refractive Surgeons

For those of you who are refractive surgeons, you have a whole new skill set to develop. You have to improve your cataract surgery skills dramatically. You can no longer settle for refractive errors, including residual myopia, hyperopia, or astigmatism after cataract surgery. IOL calculations must improve, and you are going to need to have either an IOLMaster (Carl Zeiss Meditec Inc., Dublin, CA) or immersion A-scan biometry. You must be able to make perfectly centered capsulorhexes to provide the optimal visual results with these IOLs. Finally, you will need to make astigmatically predictable incisions.

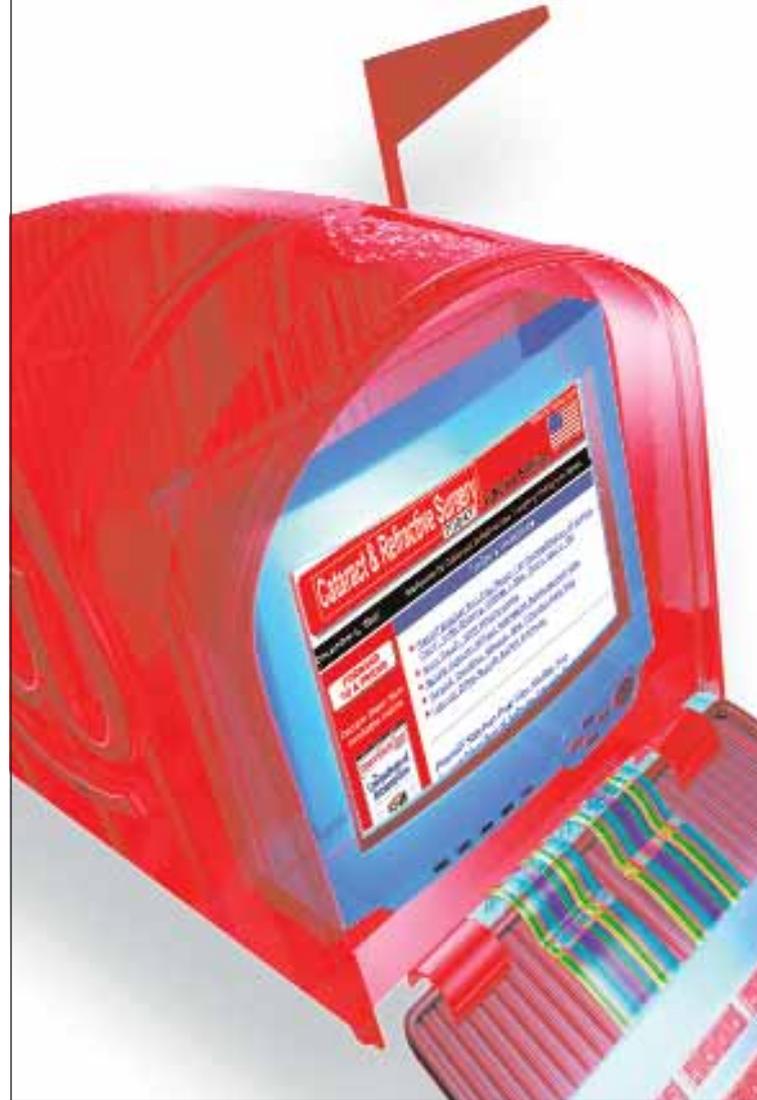
CONCLUSION

We look forward to bringing this column to you on a regular basis and hope that we can make a difference in the way you practice ophthalmology. We also welcome input from our readership. If you have suggestions for interesting articles, please feel free to contact me. I look forward to hearing your ideas as, together, we enter the exciting future of refractive IOL surgery. ■

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1. Waring, GO, Lynn MS, Gelender H, et al. Results of the Prospective Evaluation of Radial Keratotomy (PERK) study one year after surgery. *Ophthalmology*. 1985;92:177-198.



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