

IOL Surgery: As Good As It Gets

At the end of 2013, I visited my parents in Tanzania, which is where I spent the first 10 years of my life. This time, I especially enjoyed the hot weather—a great break from the long winter in London.

Brushing up on my Swahili, I spent some time seeing and treating patients at the Comprehensive Community Based Rehabilitation in Tanzania (CCBRT) hospital in Dar-es-Salaam. This nongovernmental organization is a community hospital that treats patients with disabilities. Its eye department performs phenomenal work, and the ophthalmologists accomplish a large volume of surgery annually.

The Swiss charity Light for Sight kindly arranged the donation of a refurbished crosslinking device for use in keratoconus and microbial keratitis to the CCBRT, and my wife Marcela Espinosa, MD, and I conducted a rapid training course for local ophthalmologists. Additionally, Vision Share, a US-based not-for-profit consortium of eye banks, donated corneal tissue, allowing me to perform nine corneal transplants—five deep anterior lamellar keratoplasties, and four penetrating keratoplasties—during my stay. All procedures appeared initially successful, with patients who were bilaterally blind obtaining early visual improvement.

I must say that performing these surgeries took me back in time considerably. Not only did I have to recalibrate the way I prioritized care, I also had to work with instrumentation that was not the best and most certainly not state of the art. Fortunately, I brought along some used (supposedly “disposable”) single-use instruments such as forceps and needle-holders and also some trephines that were donated by Network Medical. These tools enabled me to accomplish the work satisfactorily. (Many thanks to all those who contributed and provided assistance.)

Reading the articles in this month’s cover focus, which explore IOL surgeries from yesterday and today, I could not help but note some similarities with my recent Tanzanian experience, as I, in effect, went back in time. Reminiscing on my own 26-year career in ophthalmology, I recall transitioning from extracapsular cataract extraction to phacoemulsification in 1989. At the time, I was using implants with oval optics and, like many others, I thought this was as good as it gets.

The authors in this issue have illustrated the changing paradigms of cataract surgery, with evolving technologies and improved understanding of what can be accomplished with ocular tissue. Reading about the use of Sputnik and Choyce lenses, IOLs that were before my

time in ophthalmology (although I have taken many out at the time of penetrating keratoplasty), brought a smile to my face, as I considered the thoughts that were probably going through the heads of Lucio Burrato, MD, and Richard Packard, MD, DO, FRCS, FRCOphth—describing what were undoubtedly cutting edge lens designs at the time.

Many of the events told in these articles have resulted in giant leaps forward in cataract surgery and provided our patients with amazing outcomes. Refractive lens exchange has become more commonplace, and patients derive great benefit from the high-performance lenses we have at our fingertips today. Small-incision cataract surgery—down to sub-2-mm—and the ability to implant lenses through these incisions has reduced surgically induced astigmatism to amounts that are negligible, if present at all. Improved diagnostics, in particular partial coherence interferometry with the IOLMaster (Carl Zeiss Meditec) has dramatically reduced postsurgical refractive error, providing surgeons with a phenomenal level of confidence in the types of outcomes and expectations we can communicate to our patients.

The advent of the femtosecond laser is an interesting leap in cataract surgery, and this has been discussed in previous editorials. Standardizing variables such as capsulorrhexis size and shape should reduce the bandwidth of error and hopefully provide even better predictability. Much work is being done to demonstrate the benefits of this technology; however, a paradigm shift will take place only when we use the technology to change the components of the surgical process to enable complementary technologies such as new IOLs. I fully expect that some of the implants we currently consider to be cutting edge, including the latest trifocal designs, will seem medieval in the next decade.

We are practicing in good times for ophthalmology. Here’s wishing a big *Thank You* to all of the individuals and companies involved in innovation, technology, and education in our specialty. At *CRST Europe*, we take great pride in educating and keeping our readership up to date, and we hope you enjoy this issue.

We wish you all a happy and prosperous 2014. ■



Sheraz M. Daya, MD, FACP, FACS, FRCS(Ed), FRCOphth
Chief Medical Editor