

Diversify Your Refractive Practice

Be passionate about improving your surgical technique across many areas.

BY PAVEL STODULKA, MD, PhD

My career as a refractive surgeon started in 1992 during my residency at the Bata Hospital, where the first laser refractive surgery in the Czech Republic was performed. In 1994, I became the first refractive surgeon to perform LASIK in the Czech Republic and founded a private clinic, the Gemini Eye Center (Figure 1). The clinic now operates at four facilities in different cities across the country—Prague-Pruhonice, Zlin, Brno, and Ceske Budejovice. Today, we are a high-volume, cutting-edge surgical center performing not only refractive laser and cataract surgery but also vitreoretinal surgery and corneal transplantation.

Building a high-end practice not only requires a dedicated surgeon and staff, it also requires you to be passionate about improving your surgical technique. As a surgeon, I always try to follow new trends and technologies and incorporate them into the clinical practice. In 2006, I performed the first femtosecond laser LASIK in the Czech Republic; I became the fifth user of the Femto LDV femtosecond laser (Ziemer Group, Port, Switzerland) in the world.

I am strongly convinced that performing a wide range of surgeries, even those extending beyond refractive surgery, only creates more universal surgeons and is beneficial to our clinic and, mainly, to our patients.

LASER REFRACTIVE SURGERY

Our gold standard in laser refractive surgery is wavefront-optimized LASIK. We use the Allegretto Wave Eye-Q 400 Hz excimer laser (Wavelight AG, Erlangen, Germany), after creating a 90- μ m flap with the Femto LDV. Our center was the first in the Czech Republic to install both devices, the Allegretto in 2003 and the LDV in 2006 (Figure 2).

Wavefront-optimized treatments provide patients with high-quality vision and minimize halo and glare effects, even in patients with higher refractive errors. Creating a thin lamella with the femtosecond laser provides an additional safety factor; the superior hinge guards against flap dislocation, and the thin flap leaves more tissue for ablation.



Figure 1. This is the main building of the Gemini Eye Clinic in Zlin.



Figure 2. Refractive workstation: femtosecond laser on the left, the Allegretto Wave in the middle, and the EMR screen on the right.

For abnormal eyes, we use Placido-guided treatments and Scheimpflug image topography-guided treatments. Our internal network enables us to see Pentacam (Oculus Optgeräte GmbH, Wetzlar, Germany) data directly from the Allegretto workstation and import data to the laser computer without leaving the laser operating room. This is more convenient compared with running across the clinic with a floppy disc. The Femto LDV is a portable unit, and we move it among our four clinics.

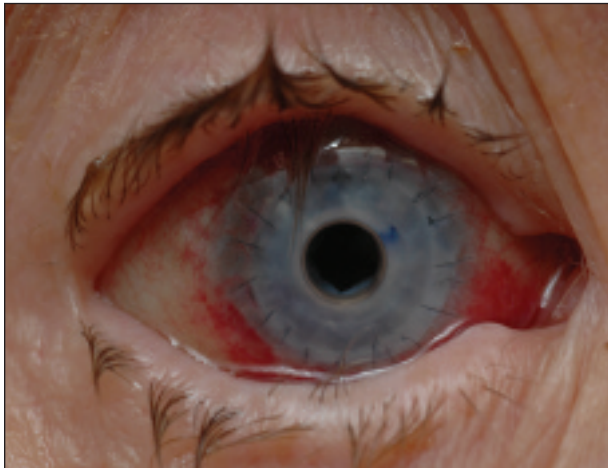


Figure 3. An artificial cornea the first day after surgery.

LENS SURGERY

Lens surgery is also a growing part of our practice, with refractive lens exchange (RLE) gaining momentum as a popular procedure. Many other high-end refractive clinics have also started to introduce RLE as a viable option for patients. RLE and cataract surgery share two prominent modern features: the use of microcoaxial phaco and multifocal IOLs. Our standard incision size is 2.2 mm. In 95% of RLEs and 30% of cataract cases, I implant a multifocal IOL. Our first choice today is a diffractive multifocal IOL. We use the hydrophobic acrylic AcrySof IQ Restor +3.0 D (Alcon Laboratories, Inc., Fort Worth, Texas) and the hydrophilic acrylic PDIFF (EyeolUK, United Kingdom) lenses. With both lenses, patients see well at distance and intermediate and read J4 or better. We have limited experience with the Crystalens HD (Bausch & Lomb, Rochester, New York); however, results with this accommodating IOL look promising. To give our patients the best chance to adapt quickly to multifocal IOL implantation, we offer simultaneous bilateral surgery. Of course, monovision with monofocal IOLs is being used in clinical practice as well.

Our cataract patients can also choose a photochromic IOL, the Aurium (Medennium, Inc., Irvine, California), which turns the color of the optic yellow in the presence of UV light and clears when no UV light is shining on it. IOLs with an aspheric optic and blue-light filter are also part of our portfolio. We do not forget to mention to our patients that all IOLs have UV filters. Surprisingly, often people are not aware of it.

KERATOCONUS

For eyes with keratoconus, we most often perform corneal crosslinking. It is an essential part of our clinical work because it is common that a candidate for laser refractive surgery turns out to be keratoconic.



Figure 4. The President of the Czech Republic visiting Gemini Clinic.

Corneal implants are another alternative for the treatment of keratoconus. We happened to be the first place in the world to implant the Keraring (Mediphacos Ltd., Belo Horizonte, Brazil) into corneal tunnels created by the Femto LDV. Lately, we have also implanted Ferrara rings (Ferrara Ophthalmics, Brazil) into femtosecond-created channels.

CORNEAL TRANSPLANTATION AND ARTIFICIAL CORNEAS

Corneal transplantation has changed considerably during the past few years. Although penetrating keratoplasty is still the most frequent transplantation procedure performed at our clinic, we also now perform more Descemet's membrane endothelial keratoplasties, Descemet's stripping endothelial keratoplasties, and deep anterior lamellar keratoplasties than we have in the past.

Perhaps the most gratifying surgery that we now perform is the implantation of the Boston KPro artificial cornea (Boston Keratoprosthesis; Massachusetts Eye and Ear Infirmary, Boston; Figure 3). To date, we have performed five cases. All patients were legally blind preoperatively and today can walk the street on their own; most can even read without glasses. Eligible patients are those with opaque corneas who are not suitable candidates for corneal transplantation but have a functional retina and optic nerve. Our most recent KPro implantation case was a man who was blind for more than 50 years.

VITREORETINAL SURGERY

The vitreoretinal department of our clinic is busy, performing sutureless 23-gauge pars plana vitrectomy as the gold standard. Intravitreal antivascular endothelial growth factor injections are frequent; bevacizumab (Avastin; Genentech, Inc., San Francisco) is the drug of choice.

TAKE-HOME MESSAGE

- Learn to perform a wide range of surgeries to offer to patients.
- Refractive lensectomy is a growing part of high-end refractive practices.
- Electronic medical records are essential, especially for multiple-site clinics.

ELECTRONIC MEDICAL RECORDS

We have not been able to find a system for electronic medical records (EMR) that suits our requirements. Therefore, we decided to create our own system, which we have been using for more than 3 years. We are continually improving it. While the patient is at the clinic, we do not use paper documentation. We create print-outs only at the end of the patient visit—we give him the printed version and store another print-out for insurance companies. During LASIK surgery, we put all the numerical data into the EMR protocol, including the central corneal thickness and stromal bed or residual stromal bed thicknesses. The protocol instantly gives us the flap thickness, and all data are ready to be statistically processed.

For a clinic operating in three different cities, it is

essential to be able to view the medical records from different cities. With paper-based medical records, we would be lost.

ADVERTISING

We perform limited advertising in the form of press and radio campaigns. However, our best source of advertising is word-of-mouth referrals given by our patients. This stable source is a very sensitive indicator of the quality of both our medical work and how we treat our patients. Word-of-mouth advertising is the means by which we secure most of our clients; even the President of the Czech Republic became our patient this way (Figure 4). It is also important to keep the private eye doctors in the country aware of our activities and our progress in the quality of medical care.

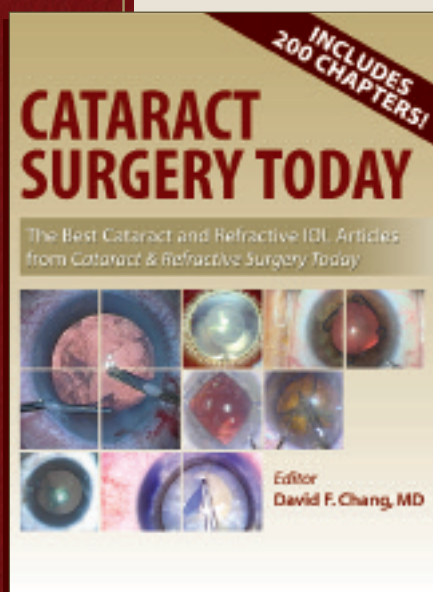
Finally, building and running a clinic that operates in different locations and performs a wide range of surgeries is not possible without a dedicated team of doctors, nurses, and managers. ■

Pavel Stodulka, MD, PhD, is Chief and Chief Executive Officer of the Gemini Eye Clinic, Czech Republic. Professor Stodulka states that he has no financial interest in the products or companies mentioned. He may be reached at fax: +420 577 216 900; e-mail: stodulka@lasik.cz.



AVAILABLE SOON IN HARDBACK...

CATARACT SURGERY TODAY



The Best Cataract and Refractive IOL Articles from *Cataract & Refractive Surgery Today*

This comprehensive textbook is a compilation of 200 of the best cataract and IOL articles published in *Cataract & Refractive Surgery Today* as selected by editor David F. Chang, MD. Covering topics such as strategies for complicated cases, endophthalmitis prophylaxis, new surgical technologies, complications, and both monofocal and refractive IOLs, this 430-page textbook is authored by the most prominent names in the fields of cataract and refractive surgery. Please visit www.cataractsurgerytoday.com to view the table of contents and sample chapters.



David F. Chang, MD