

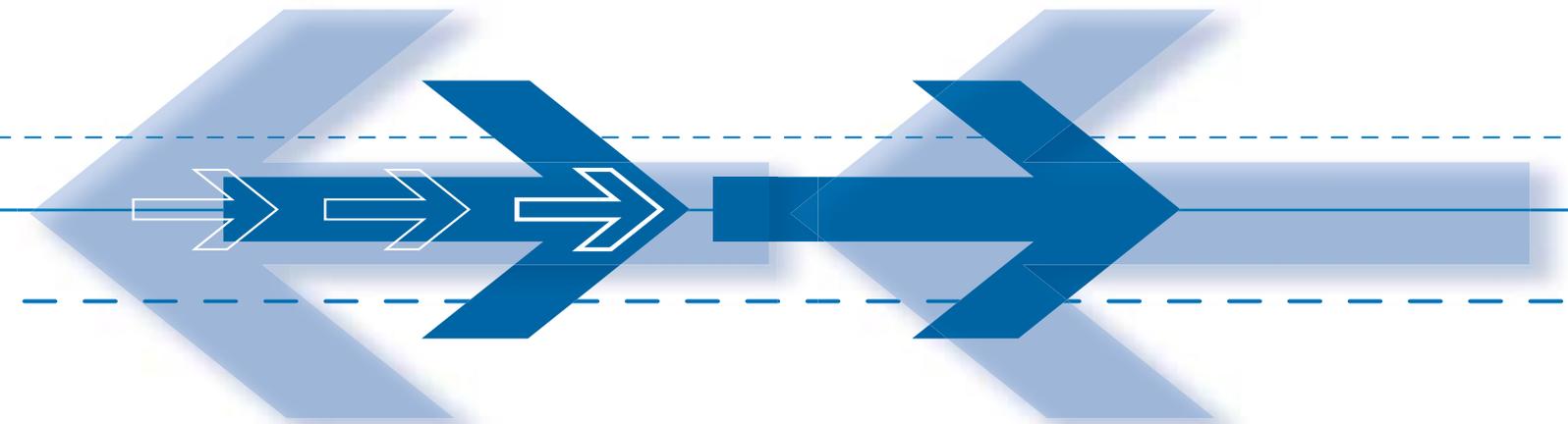
Ophthalmology Times[®]

EUROPE



Exchanging lenses for clear vision

Dr. Magda Rau discusses presbyopia
and refractive surgery with lensectomy
and Tecnis



Exchanging lenses for clear vision

Presbyopia and refractive surgery with lensectomy and Tecnis

Refractive surgery dates back to the 19th century, when L.J. Lans demonstrated the effect of applying heat to the cornea to treat astigmatism. Once considered only by the courageous, refractive surgery has now become an everyday alternative form of visual correction, made possible by improvements in our understanding of corneal anatomy and physiology and the development of remarkable new tools.

Here, Magda Rau, MD, discusses the idea of performing clear lens exchange with a multifocal intraocular lens.

Magda Rau, MD

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With the increased popularity of refractive surgery, patients are coming to expect more and more of their vision. Many people are reluctantly wearing reading glasses and so are prepared to undergo refractive surgery to avoid this. Clear lens exchange followed by implantation of multifocal intraocular lenses (IOLs) is not only a treatment for presbyopia; it can also be used as a tool for patients who are interested in refractive surgery.

At an age when accommodation is failing, extraction of the crystalline lens and implantation of a multifocal IOL is a compromise-free solution that liberates patients of the encumbrance of wearing eyeglasses or at least restores their independence.

From September 2004 to February 2005, we implanted the Tecnis multifocal IOL (AMO) into 22 eyes of 11 patients; the mean age of the patients was 56 years. The mean preoperative refraction was +2.75 (range -4.25 to +4.75). Our patient selection criteria included those patients with a strong desire to achieve enhanced spectacle independence, and those with no eye pathology.

Excluded from the study were patients with astigmatism of more than 1.25 D, patients with very high expectations for postoperative vision, extremely anxious and/or demanding patients, patients whose jobs required high visual acuity in the near distance, patients who were never satisfied with multifocal glasses and patients with an insufficiency in the suspensor ligament of the lens.

Phacoemulsification was performed through a clear corneal incision. Capsulorhexis was then performed with a diameter of 4.5 to 5.0 mm — smaller than usual, with the aim of achieving a better centering of the lens. The IOL was implanted into the capsular bag, using the Unfolder Silver Series implantation system (AMO). An enlargement of the 3.2 mm incision was not necessary. In all cases the anterior capsule covered the lens.

How did the lens perform?

Three months after the implantation of Tecnis, the mean uncorrected visual acuity (UCVA) for distance vision was 0.92, while the mean BCVA for distance vision was 0.98 and the mean correction -0.25.

Mean visual acuity (UCVA) for near vision was 0.91. The UCVA for near vision was 20/32 or better in all patients, while 72% achieved 20/20 vision and 10% achieved 20/25 or better.

Contrast sensitivity was tested using the functional acuity contrast method developed by B.P. Ginsburg. The curve of all patients' eyes in our study lay in the normal area with the average curve of our group found in the middle of the normal area of the functional acuity contrast test.

Importantly, what did the patients think?

Three months postoperatively, the following questionnaire was issued to our patients, which they were asked to answer anonymously.

Q&A

Q: Are you satisfied with the outcome after implantation of the Tecnis multifocal?

A: All patients in our study were satisfied with the achieved result after implantation.

Q: Do you experience glare or halos?

A: When asked whether they experienced glare, 27% of patients answered “yes”, but only 9% found the experienced glare disturbing. When asked about halos, 18% of patients noticed halos around light sources, but only 9% of the patients found them disturbing.

Q: Do you need glasses?

A: 82% of patients answered “no” while the remaining 18% answered “sometimes”. None of the patients needed glasses all of the time. Two patients (18%) needed reading glasses only occasionally.

Overall, we thought clear lenses exchange with the Tecnis multifocal IOL appeared to be an extremely useful refractive surgery modality, producing excellent visual acuity for distant and near vision, high independence from glasses and offering 100% patient satisfaction. This excellent satisfaction rate was, in our opinion, because of the correct patient selection, strong consideration of exclusion criteria and patient education. We did not promise patients complete freedom from glasses, only independence.

By reducing spherical aberration, Tecnis may greatly compensate for loss in contrast sensitivity and other visual disturbances arising from the projection of two separate images onto the retina.

The youthful, aberration-free human eye has become the standard by which patients and ophthalmologists evaluate the results of cataract and refractive eye surgery today. With our increased knowledge and the evolution of new techniques and technologies, each innovation takes us one step closer to achieving that youthful, aberration-free eye.



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*Indicated for the correction of hyperopic presbyopia.

