

MAGNIFYING LENS

High-add sectorial bifocal IOL provides improved vision and quality of life for patients with advanced AMD. *Roibeard O'hEineachain reports*

A new, magnifying high-add intraocular lens (Lentis MAX LS-313 MF80, Oculentis, Germany) can enhance quality of life and improve the independence in performing daily activities for patients with progressed age-related macular degeneration (AMD), according to a study presented by Andreas F. Borkenstein MD at the 21st ESCRS Winter Meeting in Maastricht, The Netherlands.

“We can report very high levels of satisfaction with this new IOL. All patients ranked their quality of life better than before,” said Dr Borkenstein, who is cataract surgeon in private practice in Graz, Austria.

The case series study included 11 patients ranging in age from 74.5 to 86.1 years. All had clinically significant cataracts and progressed dry AMD. Their best corrected distance visual acuity (BCDVA) ranged from 0.9 to 0.5 logMAR and a best corrected near visual acuity (BCNVA) of 1.3 to 0.5 logMAR, he noted.

All had stable OCT findings for three months preoperatively. No patients in the study had wet AMD with active neovascularisation or cystic oedema. Other exclusion criteria were glaucoma, astigmatism greater than 1.0D and high ametropia.

All patients underwent phacoemulsification and implantation of the new magnifying IOL in their better eye, Dr Borkenstein said. The foldable one-piece lens is composed of copolymer acrylic consisting of hydrophilic acrylates with a hydrophobic surface. The UV absorbing lens has a 360° square edge technology (optic and haptic) for PCO prevention and can be implanted through 2.2mm clear cornea incisions.

The sectorial bifocal acrylic lens has an aspheric bi-convex design with an add power of 8.0D, equating to 6.0D on the spectacle plane. That, in turn, corresponds to a 1.5 times magnification at a distance of 25cm to 30cm and a three times magnification at 12cm to 15cm, Dr Borkenstein explained.

IMPROVEMENT IN UNCORRECTED VISION

All patients had an immediate improvement in their uncorrected visual acuity (VA) after surgery. At the three-month control exam VA ranged from 0.48 logMAR to 0.2 logMAR, compared to a range of BCDVA 0.9 logMAR to 0.5 logMAR preoperatively.

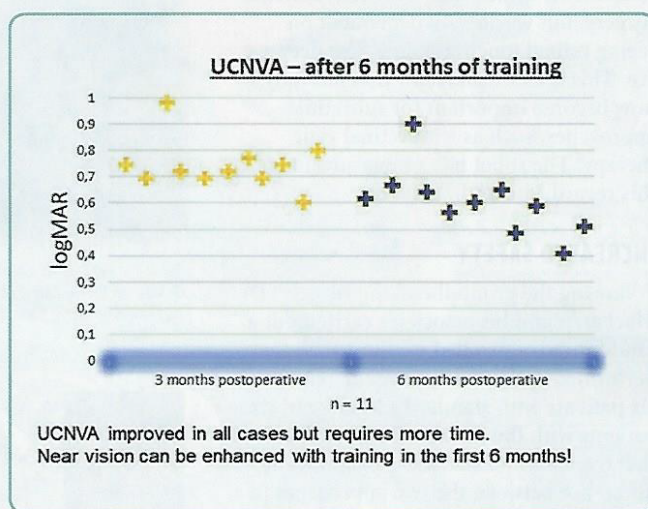
Uncorrected near visual acuity (UCNVA) also improved significantly but required more time to take effect, because of the training and neuro-adaptation patients required to become accustomed to the IOL's bifocal optics.

At three months follow-up, UCNVA ranged from



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Courtesy of Borkenstein & Borkenstein

0.98 logMAR to 0.6 logMAR compared to the preoperative range of 1.0 to 0.8 logMAR. By six months follow-up, their mean UCNVA ranged from 0.9 to 0.4. Furthermore, continued improvements in UCNVA were also evident from the patients' increasing ability to perform many tasks that they were unable to perform previously, as they reported in their responses to a questionnaire.

Prior to surgery and at six months follow-up Dr Borkenstein and his associates presented a list of 10 everyday activities to the patients, who indicated which they were capable of performing independently. They included normal activities such as reading, eating and cooking, attending to personal hygiene and using a phone.

He noted that on a scale of zero to 10, with 10 indicative of best autonomy and zero indicative of the worst, the patients had a mean score of 4.3 (range 2-6) prior to surgery, compared to a mean score of 8.0 (range 3-9) three months after surgery. By six months after surgery their score improved still further, to 8.8 (range 5-10).

Moreover, at six months follow-up all 11 patients rated their subjective well-being as better than before. Seven patients felt it was “very clearly better”, three felt it was “clearly better” and one said it was “highly better”.

Dr Borkenstein noted that one of the goals of the study was to change conventional thinking with regard to patients with advanced AMD. He pointed out that AMD affects 35 million people worldwide and is the most common cause of central vision loss in people older than 65. However, practising ophthalmologists commonly tell their patients with advanced disease that there is nothing they can do for them and cataract surgery is a contraindication. What an absurd thought!

“There are thousands who have to wait for death for a release. In our opinion, it is time for the antiquated mindset regarding these hopeless cases to change. We believe major opportunities arise from a new subcategory in cataract surgery, let's call it 'MAGS – magnifying surgery' as cataract surgeons love acronyms,” he smiled. “We can't look away any more. We have to realize that people with advanced AMD live longer nowadays and deserve closer attention,” he emphasised.

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