

**BY MAGDA RAU, MD**

To satisfy the individual needs of patients after multifocal lens implantation, we have—in the past—implanted two refractive lenses (ie, Mf4 [Carl Zeiss Meditec AG, Jena, Germany] and the Array [Advanced Medical Optics, Santa Ana, California]) in the eyes of one patient. We asked the question: “Will the implantation of different multifocal IOLs (ie, diffractive and refractive) keep or even increase the advantages of both lenses and further increase postoperative satisfaction?”

### MATERIAL AND METHODS

From September 2005 to May 2006, 10 patients received a refractive multifocal IOL (Rezoom; Advanced Medical Optics) in one eye and a diffractive multifocal IOL (Tecnis; Advanced Medical Optics) in the other eye after the phacoemulsification via a clear corneal incision. The capsulorhexis was between 4.0 mm and 4.5 mm—smaller than usual—with the aim of achieving a better centring of the lens. IOL implantation was carried out with the Unfolder Series (Advanced Medical Optics). Preoperative refraction ranged from +5.25 to -4.50.

Enrolled patients were aged from 48 years to 72 years (mean age 62 years), and had bilateral cataract; no retinal and optic nerve pathology; the strong desire to achieve spectacle independence; and the willingness to accept possible visual side effects including halos and glare. Excluded from the study were patients with astigmatisms over 1.25 D; demanding patients with extremely high expectation for postoperative vision; patients with glare; and patients who were never satisfied with multifocal spectacles.

### RESULT

The mean UCVA for distance was 0.83, while the mean BCVA was 0.86, with a mean correction of -0.23 D. The mean intermediate UCVA (0.70 cm) was 0.68, and the

mean near UCVA (30 cm) was 0.70. To evaluate (1) post-surgical patient satisfaction, (2) optical side phenomena, (3) and spectacle independence, we asked patients to anonymously answer an appropriate questionnaire 3 months after surgery. All patients were satisfied with their optical results.

Eighty percent of patients were free from glare. Of the 20% who had glare, none found it disturbing. Halos were experienced by 40% of our patients, however, only 10% rated them as disturbing when driving at night.

The rate of achieved spectacle independence was 80%. Of those patients who needed reading spectacles, it was for the occasional small print materials (eg, medication leaflets) or during reading in dim lighting.

### CONCLUSION

Mixing a diffractive and a refractive multifocal IOL in one patient (ie, Tecnis and Rezoom, respectively) offers excellent intermediate, distance, and near vision and provides good visual function across a range of distances. This results in high rates of spectacle independence and 100% patient satisfaction. This excellent satisfaction rate was, in our opinion, because of the careful patient selection and education. All patients were informed about potential visual side effects, glares, and halos. Furthermore, we did not promise patients complete spectacle freedom, only independence. Mixing and matching a diffractive and refractive IOL also offers the maximum strength of refractive and diffractive technologies to provide greater spectacle independence. In my opinion, it is the right answer to increase patients' needs and expectations. The option of mixing and matching gives each surgeon the possibility of satisfying a larger share of patients.

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