

+4.00 D [5, 14]. The AcrySof® ReSTOR® SN6AD1 IOL (Alcon Corp., Fort Worth, Texas, United States) and AcrySof® ReSTOR® SN6AD3 IOL (Alcon Corp., Fort Worth, Texas, United States) have been proven in previous studies to two efficient aspheric IOL models with near additions of +3.00 D and +4.00 D [15, 16]. A more recent brand of diffractive multifocal intraocular lens is the Acriva^{UD} Reviol, which provides +3.75 D near addition for its two models, BB MF 613 and BB MFM 611. Having the same optic design, these two models claim to yield satisfactory far, intermediate, and near vision; the BB MFM 611 model had already been proven to provide effective visual acuities and contrast sensitivities [6]. The aim of the study is to evaluate and compare the visual and optical performances of the eyes after implanting these four multifocal IOL models with three different near additions, +3.00 D (AcrySof® ReSTOR® SN6AD1), +3.75 D (Acriva Reviol^{UD} BB MF 613 and BB MFM 611), or +4.00 D (AcrySof® ReSTOR® SN6AD3).

10.4.1 AcrySof® ReSTOR® SN6AD1 and SN6AD3

Both AcrySof® ReSTOR® SN6AD1 and SN6AD3 consist of a peripheral refractive zone and a central zone with a 3.6 mm apodized diffractive design. The apodized diffractive region is situated in the central 3.6 mm optic zone of the IOL. The corresponding diffractive structures of the AcrySof® ReSTOR® SN6AD1 and SN6AD3 have 9 and 12 steps, which provides near addition power of +3.00 D and +4.00 D.

10.4.2 Acriva Reviol BB MF 613 and BB MFM 611

The two +3.75 D multifocal IOL models, Acriva Reviol BB MF 613 and BB MFM 611, have a different diffractive ring distribution, which provides excellent far, middle, and near vision. Its special polished active-diffractive surface minimizes unwanted scattered light and halos and

offers the patient high contrast sensitivity even during night vision.

In a prospective single-center study comprised of cataract patients who had phacoemulsification with multifocal IOL implantation from January 2009 to December 2012 at the Shinagawa LASIK Center, Tokyo, Japan, 133 eyes from 88 patients (58 women and 30 men) were included. These eyes were randomly divided into three groups: Group A consisted of eyes implanted with multifocal IOLs with AcrySof® ReSTOR® SN6AD1 IOLs (+3.00 D); Group B had eyes with Acriva^{UD} Reviol BB MF 613 or BB MFM 611 IOLs (+3.75 D); and Group C eyes were implanted with AcrySof® ReSTOR® SN6AD3 IOLs (+4.00 D).

Surgical technique and postoperative treatments were the same as in the previous study described in this chapter.

There were no statistically significant differences in terms of gender, age, IOL power, UDVA, sphere, cylinder, MRSE, UNVA, intraocular pressure, or ECD among the three groups preoperatively ($P > 0.05$). The mean values of CDVA and CNVA in the eyes of Group B were statistically significantly better than the eyes of Group C ($P = 0.0258$ and $P = 0.0266$, respectively).

There were no statistically significant differences in UDVA, CDVA, sphere, cylinder, MRSE, intraocular pressure, or corneal endothelial cell density among the three groups ($P > 0.05$). The mean values of UNVA and CNVA in the eyes of Group C were significantly better than the eyes of Group A ($P = 0.0284$ and $P = 0.0062$, respectively).

Conclusions

The advantages of Acriva^{UD} Reviol BB MFM 611 IOL and BB MF 613 IOL are as follows:

- *Ideal additional power (+3.75 D)*

The mean highest near visual peak with Acriva^{UD} Reviol BB MFM 611 IOL and BB MF 613 IOL was found to be at 33 cm (-3.00 D) in our study. This distance was ideal for near acuity tasks such as reading books, using mobile phone, and checking the time on the wristwatch.