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First Implantation of an Aspheric Toric Multifocal IOL

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Purpose:

In this report a customised aspheric, toric, multifocal IOL was implanted in a 45-years-old female patient, who presented for presbyopic refractive lens exchange.

Methods:

A 45-years-old female patients consulted our refractive clinic. Her refraction was: OD: +8.0/-2.25/170°=20/25 OS: +10.25/-3.25/50°=20/25. ACD measurement (from endothelium) was 2.45 (OD) and 2.34mm (OS). Corneal thickness was 528 and 507µm. Keratometric astigmatism was 3.08 Dpt. (OD) and 3.68 Dpt.(OS). After counselling the patient about different possibilities, a decision was made for refractive lens exchange with a custom made toric, multifocal IOL, manufactured by Rayner, UK.

Results:

The patient underwent successful refractive lens exchange in general anaesthesia via clear cornea incision and phacoemulsification in both eyes. The IOL implanted in the OD was a Rayner C-flex 588F of +33.5 Dpt., +3.0 Near Add, -3.5 Torus, in OS IOL power was +36.5 Dpt., +3.0 Near Add, -4.5 Torus. The multifocal design was that of the Rayner M-Flex, a refractive MIOL with +3 near add and aspherical intermediate zones. One month postoperatively the patient had an uncorrected distance VA of 20/25 (OD) and 20/30 (OS), uncorrected near acuity was binocular 20/40. The defocus curve showed an accommodative amplitude of 4-5 diopters.

Conclusion:

The combination of different optical principles in one IOL type is possible. Patients functional results were very good. Patient's satisfaction and tolerance was also very good. The addition of an fixed torus to an multifocal IOL will increase the numbers of selectable patients for Multifocal IOL implantation tremendously.