

Implantable collamer lens (ICL) in Keratoconus review

Wadah Atamish



ABSTRACT

Keratoconus is a progressive, non-inflammatory thinning of the cornea that induces myopia and irregular astigmatism and decreases the quality of vision due to monocular diplopia, halos or ghost image. Keratoconus patients not qualified for corneal procedures and intolerant to refractive correction by spectacles or contact lenses have been implanted toric posterior chamber phakic intraocular lenses (PC pIOLs) alone or combined with other surgical procedures to correct the refractive errors associated with keratoconus as an off label procedure with special informed consent from the patients. The toric implantable collamer lens (TICL) is conventionally indicated for the correction of myopia in adults aged 21-40 years with myopia ranging from 13.0 to 23.0 diopters (D) and up to 6D of astigmatism at the spectacle plane, with anterior chamber depth (ACD) \geq 2.8 mm and a stable refraction within 0.5D for 1 year prior to implantation. The patients should have a best corrected distance visual acuity (CDVA) of at least 20/50 with no previous ocular surgery, normal intraocular pressure and open anterior chamber angles (Shaffer grade 3 and 4 or Scheie grade 0 and 1). The results of peer-reviewed, published articles outline the role of each treatment modality in addressing the different optical manifestations of keratoconus. ICRS reduce irregular corneal astigmatism and help to centralize eccentric cones. Corneal CXL (cross linking) is performed once the corneal shape normalizes to stabilize the biomechanically unstable cornea. Intraocular correction of the residual spherocylindrical refractive error with a toric pIOL gives good refractive outcomes though the visual quality is limited in those eyes with associated high corneal total and higher order aberrations.

BIOGRAPHY

Wadah Atamish is a consultant ophthalmic surgeon. He is an undergraduate from College of Medicine, Mustansiriyah University (1984-1990). He graduated as MB, ChB (Diploma of ophthalmology) in 1997 from College of Medicine, Baghdad University. He got Vitreo Retinal Fellowship at Jordan University Hospital in the year 2003. His professional experience started from 2003-2004 at Lasik Department, Specialty Hospital, Amman, Jordan and then from 2004-2005 he worked at Al Khalidi Eye Center, Amman, Jordan. As an Ophthalmic Surgeon (vitreo-retinal surgeon) he is working from 2005- till date at Al Basheer Hospital, Ministry of Health at Amman, Jordan.



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