Recent advances in phakic intraocular lens [phakic iol]

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Refractive surgery is usually classified in two categories:a) Corneal based refractive surgery in which refractive surgery is done by lasers by corneal reshaping. PRK and LASIK are standard procedures in this group.b) Lens based refractive surgery in which is done either by altering the natural lens or by placing an intraocular lens inside the eye in front of patient’s natural lens.Lens based refractive surgery is certainly a growing segment of refractive surgery for last few years. It has gained worldwide acceptance and popularity. Phakic IOLs have recently gained popularity especially for the management of high Refractive errors. This has been seen partly due to the inability of corneal refractive procedures to satisfactorily correct higher refractive errors due to the problems associated with regression, ectasia and poor quality of the corneal refractive surface after ablation for higher powers. The increasing use of Phakic IOLs has also been due to tremendous improvements in the designs and materials used for these IOLs and also due to better microsurgical techniques and vastly improved surgical skills as also due to better viscoelastic devices.Major advantages associated with the use of Phakic IOLs include ability to correct higher amounts of myopia & hypermetropia, fast visual recovery, better quality of vision with lesser induction of higher order aberrations andSummary110preservation of accommodation. All these factors combined with the ease for the regular cataract surgeon to also enter the field of Refractive surgery have contributed to the rapidly gaining popularity of Phakic IOLs. Phakic IOLs can be classified into anterior chamber Phakic IOLs and posterior chamber Phakic IOLs. Anterior chamber Phakic IOLs can be classified as angle supported or iris-supported. Angle-supported lens becomes fixated somewhere in the angle structures. Different types of anterior chamber lenses are available; foldable and unfoldable types, different haptic designs and different optic diameters are found. Nevertheless, these lenses are more prone to complications than the other two types. Artisan Phakic lens is an iris-supported IOL. The lens haptics attach to the midperipheral, immobile iris. A foldable version of this lens is called the Artiflex, and has been available for a few years now with comparable results. The Phakic posterior chamber lenses are made of soft material and the two available posterior Phakic IOLs are the Implantable Contact Lens and the Phakic Refractive Lens. They differ in design, but have similar outcomes and complications.Despite the popularity and success that Phakic IOLs are enjoying, they may still be associated with complications including endothelial cell loss, pupil ovalization, induced astigmatism,

glaucoma, and chronic subclinical inflammation for anterior chamber IOLs; for posterior chamber IOLs, complications include cataract formation, pupillary block, pigment dispersion, and glaucoma. These patients need to beSummary111under constant surveillance for early detection of any possible complications. The development of Phakic IOLs is an ongoing process, and these lenses should be used with caution. Many patients currently have no good option for correcting their refractive error other than Phakic IOLs. In some patients, the procedure is successful and the patients are overwhelmed by the optical outcome. The problems must still be addressed. As experience with these lenses increases, the results will continuously improve. After looking at the reported complications with Phakic IOLs, it has been concluded that the perfect Phakic IOL has not yet been developed. This remains a goal for the next decade of refractive surgery.