Intacs intra corneal ring segment’s role in refractive surgery

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INTACS are important to the future of refractive surgery because they allow us to correct ametropia (low-moderate myopia, keratoconus) without making anatomical changes directly to the central optical pathway.In addition, Intacs can be removed, giving us more options of dealing with natural changes in vision, such as presbyopia, or an imperfect result. There is also a certain satisfying simplicity to Intacs.The INTACS are designed to improve the outcome of corneal refractive surgery by reducing the effect of corneal wound healing and by maintaining the positive corneal asphericity.Concerning the advantages and complications of INTACS, INTACS have the advantages of reversibility, safety, predictability, and effectively reduced or eliminated mild myopia (-1-0 to –3.50D) the refractive effect was stable over time.Regarding the complications of INTACS, they consist of intraoperative and postoperative complications.The intraoperative complications occurred more frequently at the early stages of the clinical trial including anterior corneal perforation and posterior one. These perforation healed spontaneously without suturing and no loss of BSCVA. Improved surgical training may reduce intraoperative complication.The diffuse intrastromal tunnel haze that appeared medially and laterally to the ring segments in all eyes probably occurred because lamellar dissection to form the channel disrupted the lamellar structure of the collagen fibrils. The haze gradually lessened throughout the 2-year follow-up presumably because the collagen lamellae healed with amore normal structure.Focal white deposits that appear adjacent to the ring segments were thought to be lipid deposits and may be come from stressed keratocytes, which are known to produce lipids.Explantation of INTACS and loss of one or two lines of BSCVA also from ICRS complications, removabillity is an important consideration for both the surgeon and the patient, especially in comparison with other refractive corneal surgical procedures, which permanently alter the cornea. Patients seeking a long-term alternative to glasses and contact lenses, but uncomfortable with the finality of permanent changes to their vision, may be amenable to a removable or replaceable alternative.As to keratoconus, the preliminary investigation has demonstrated promising results in applying INTACS, micro-thin prescription inserts seem to provide a viable method for treating clear corneal keratoconus for patients who are contact lens intolerant. The corneal steepening and astigmatism associated with keratocouns were reduced, and visual acuity was improved with treatment in almost all cases.Further follow-up and additional cases are needed to draw final

conclusions regarding the efficacy of this procedure for treating keratoconus.Long term study must be conducted to ascertain the impact intacs inserts treatment has on the natural progression of keratoconus, results of using intacs for treating keratoconus must be compared with those currently achieved by PK.Further study will include evaluating intacs inserts for correction of keratoconus in subjects who can still tolerate contact lenses but would like to try an alternative treatment, as well as for correcting keratectasia after laser in situ keratomileusis.