



What Is Corneal Allogeneic Intrastromal Ring Segment (CAIRS) using KeraNatural®

Indications

Corneal allogeneic intrastromal ring segment (CAIRS) is a recently developed treatment for keratoconus and post-LASIK ectasia. It is performed to improve the quality of vision. KeraNatural® is an arc or ring shaped sterile corneal allograft made from donated human corneal tissue.

Description of Procedure

CAIRS implantation is an outpatient surgery performed under topical anesthesia (you will remain awake). The procedure is performed with the aid of a laser that creates a channel inside the cornea, the clear round structure at the front of the eye. The surgeon then places a sterile arc-shaped piece of donor human corneal tissue (KeraNatural®) inside the channel to reinforce the cornea and reduce the distortion caused by keratoconus or ectasia. The wound is self-closing and usually does not require suturing.

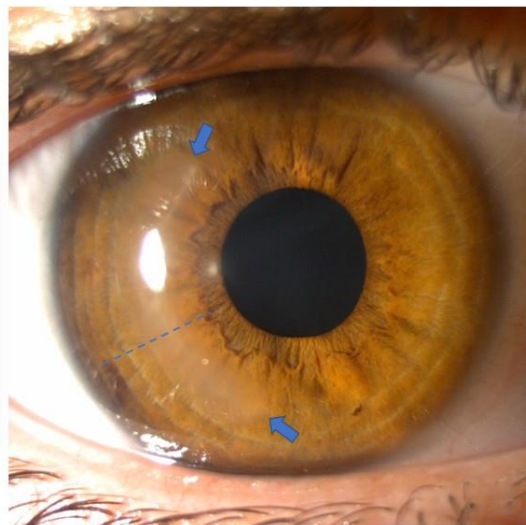
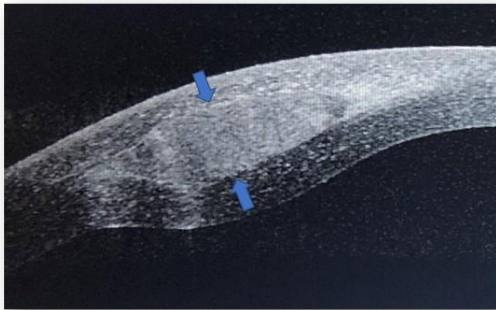


Figure. The KeraNatural® implant is faintly visible in the photograph (right). The cross-sectional optical coherence tomography image (left) shows the implant inside a channel at mid-depth in the cornea.

*images courtesy of Dr. Aylin Kilic

Expected Outcome and Potential Risks

CAIRS is expected to improve the acuity and quality of vision. It reduces common visual symptoms in keratoconus such as blurry vision and ghosting that cannot be corrected by glasses. It reduces myopia (short-sightedness) and astigmatism, which may decrease dependence on glasses. Visual improvement may not be apparent for approximately one month. A second follow-up procedure may be needed to fine tune the length and position of the implant. The potential risks of the procedure include infection and continued progression of keratoconus or ectasia. Long-term results of the procedure are not yet known.

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