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Corneal Allogenic Intrastromal Ring Segments An Alternative to DALK in Certain Situations

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Intrastromal corneal ring segments (ICRS) have been used in the past to treat keratoconus and other ectatic disorders. It is a reversible procedure that flattens the central corneal curvature while leaving the central visual axis of the cornea unaltered. The segments have an arc shortening effect and bring about a regularization in corneal topography; however, in the past, these have been made of synthetic material and have been reported to have up to a 35% complication rate¹ associated with implantation of synthetic substance within the cornea, such as corneal haze, channel deposits, corneal neovascularization, and chronic pain, as well as more serious complications, such as extrusion, erosion, migration, and infectious keratitis.

Corneal allogenic intrastromal ring segments (CAIRS) is a new procedure that was devised by the author and is similar to Intacs (Addition Technology Inc), Kerarings (Mediphacos Inc) but with the distinct advantage of using allogenic tissue^{2,3} (Figure 13-1).

INDICATIONS

Keratoconus, pellucid marginal degeneration, other causes of corneal ectasias, and irregular corneas are indications for CAIRS implantation. They are indicated in patients with mild to moderately severe disease and unsatisfactory vision with glasses. A clear cornea over the visual axis is a prerequisite.