Traumatic Dislocation and Successful Re-enclavation of an Artisan Phakic IOL With Analysis of the Endothelium

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ABSTRACT

PURPOSE: To present a case of traumatic dislocation of an Ophtec Artisan phakic intraocular lens (PIOL) and an analysis of the endothelial cell count.

METHODS: The patient presented with blurred vision in his left eye after sustaining a brow laceration. History included uncomplicated bilateral implantation of an Artisan PIOL to correct myopia.

RESULTS: The brow laceration was sutured and topical dexamethasone 0.1% qid was prescribed. One week after presentation, the PIOL was relocated. Postoperatively, endothelial cell count analysis was performed in both eyes.

CONCLUSIONS: A decrease in the hexagonality of the endothelial cells was noted in both eyes, which was substantially lower in the injured eye. [*J Refract Surg*. 2006;22:102-103.]

Iris-claw lenses were developed to treat aphakia following cataract surgery.[1] Other indications for use include secondary implantation as stand-by lenses and in traumatized eyes with anterior synechiae. These lenses have also been used in phakic eyes for the management of high myopia,[2] hypermetropia,[3] and astigmatism.[4]

CASE REPORT

A 47-year-old man presented to the emergency department after an assault. He had been repeatedly punched in the face with no loss of consciousness. His injuries included a left eyebrow laceration and extensive bilateral lid and soft tissue swelling with bruising. Immediately after the episode he became aware that the vision in his left eye was blurred. Ophthalmic history included uncomplicated bilateral implantation of an Ophtec Artisan phakic intraocular lens (PIOL) (Ophtec, Groningen, The Netherlands) to treat myopia.

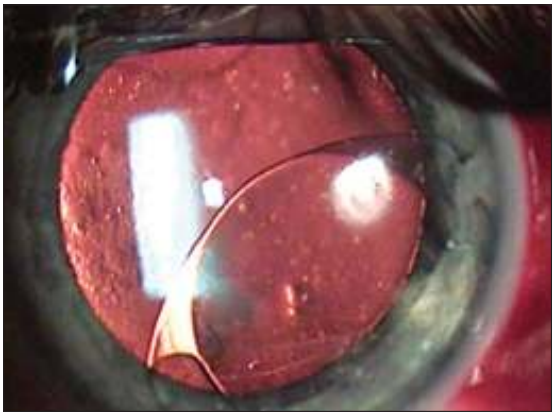

Figure 1. A displaced Ophtec Artisan PIOL in the left eye following severe facial trauma. The lens is clearly seen attached to the iris on its lateral attachment.

On examination, visual acuity was 20/20 in the right eye and 20/125 in the left eye. Anterior chambers were deep and quiet. In the left eye, the Artisan PIOL was detached from its medial iris attachment and was displaced inferiorly with the optic in the vicinity of the angle (Fig 1). The lens was not in contact with the endothelium and was lying parallel to the plane of the iris.

Topical dexamethasone 0.1% qid for the left eye was administered. The brow laceration was sutured. One week later the lens was relocated through a superior corneal section. The dislocated claw was grasped and re-enclaved on the original attachment site, which was intact as no loss of iris tissue occurred. The procedure was performed with ease, and no postoperative complications were encountered.

On examination, visual acuity was 20/20 in both eyes. The Artisan PIOL was well positioned in the left eye (Fig 2). Both anterior chambers were quiet. A tapering course of steroid drops was continued over 4 weeks. At subsequent follow-up, corneal specular microscopy was performed using a non-contact microscope (Topcon Corp, Tokyo, Japan). In the right eye, a cell count of 3008.3 cells/mm^2 was noted with a hexagonality of 32% and a normal mosaic. In the left (injured) eye, the cell count was 3209.2 cells/mm^2 with a hexagonality of 20% and a normal mosaic. A small amount of corneal haze was also noted in the left eye.

DISCUSSION

Only one other reported case of traumatic dislocation of an Ophtec Artisan PIOL exists in the literature.

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Figure 2. The Ophtec Artisan PIOL in the left eye in situ following successful re-enclavation.

This followed a non-penetrating injury with a roll of packing tape.[5] Generally, these lenses are believed to be well tolerated with early reports of minimal endothelial cell loss over a 2-year period.[6] These lenses have been shown to achieve stable attachment to the iris.[7]

In this case, although the endothelial cell counts were within the normal range, a substantial decrease was noted in the hexagonality of the endothelial cells in the two eyes—being particularly low in the eye that was injured. Mild associated corneal haze was also noted in the injured eye.

The long-term significance of these findings has yet to be determined. As no endothelial counts were taken before the original implantation, it is impossible to establish whether the traumatic dislocation of the PIOL resulted in these specific changes.

This case suggests a need for follow-up in patients who have sustained severe ocular trauma with implanted PIOLs, as there is a risk of dislocation. It is evident that the risk of injury is relatively high in young adults who are more likely to sustain violent trauma and sporting injuries. It is, however, reassuring that these lenses can be successfully repositioned.

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Anterior Stromal Puncture in the Treatment of Loose Epithelium After LASIK

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ABSTRACT

PURPOSE: To describe anterior stromal puncture, with or without a bandage contact lens, as a means to treat LASIK epithelial defects and potentially reduce the likelihood of secondary diffuse lamellar keratitis (DLK).

METHODS: Six eyes of five LASIK patients had their microkeratome pass complicated by loose epithelium, central in one case. After repositioning the flap, a 25-gauge needle on a tuberculin syringe was used to puncture the anterior corneal stroma to just beneath Bowman's layer in the affected area of irregular epithelium. A bandage contact lens was placed on two eyes, including the one with loose epithelium centrally.

RESULTS: Normal appearance of the corneal epithelium was noted by postoperative day 1; no eye developed DLK or significant epithelial ingrowth postoperatively. All eyes achieved ⩾20/20 vision.

CONCLUSIONS: By obviating, in select cases, the need for bandage contact lenses, anterior stromal puncture could increase patient comfort and remove a potential source of infection. [*J Refract Surg*. 2006;22:103-105.]

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