

A Rare Entity of Postoperative Progressive Corneal Edema: An Intruder at Iridocorneal Angle: Case Report

Postoperatif İlerleyici Kornea Ödeminde Nadir Bir Antite: İridokorneal Açıda Davetsiz Bir Misafir

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ABSTRACT A 70-year-old man developed an unexplained corneal edema in his right eye, 6 months after cataract extraction and implantation of a single piece hydrophilic acrylic posterior chamber intraocular lens in one week duration. The patient noted decreased vision and severe pain in his right eye and denied a trauma history after the cataract surgery. Since the edema was especially located at the inferior cornea; keeping a foreign body in mind, gonioscopy was performed. In our case the reason of the corneal edema was a broken haptic piece. In case of omitting the gonioscopy and missing a foreign body, may cause a corneal decompensation and a probable corneal transplantation. This case highlights the importance of keeping broken haptics in mind as a reason of corneal endothelial irritation.

Keywords: Corneal endothelial cell loss; gonioscopy; lenses, intraocular

ÖZET Yetmiş yaşındaki erkek hastada bir hafta süre içinde sağ gözünde, katarakt cerrahisi ve tek parçalı arka kamara hidrofilik akrilik lensi implantasyonundan 6 ay sonra başta açıklanamayan korneal ödem gelişti. Hasta sağ gözünde görme azalması ve şiddetli ağrı olduğunu kaydetti ve katarakt cerrahisinden sonra bir travma hikayesini reddetti. Korneal ödem özellikle alt korneal yarıda geliştiği için, yabancı bir cisimi akılda tutarak hastaya gonyoskopi yapıldı. Bizim vakamızda korneal ödemin sebebi kırık bir haptik parçasıydı. Gonyoskopinin ihmal edilmesi ve bir yabancı cismin atlanması, bir korneal dekompanseasyona ve muhtemel bir kornea transplantasyonuna sebep olabilir. Bu vaka korneal endotelial irritasyon sebepleri arasında kırık haptik parçalarını akılda tutmanın önemini vurguluyor.

Anahtar Kelimeler: Korneanın endotel hücre kaybı; gonyoskopi; lensler, göz içi

Foldable intraocular lenses (IOLs) have the advantages of easy implantation that can be accomplished through a 2.4-2.8 mm corneal incision. Although it's easy implantation technique; haptics of the IOL may be easily damaged and broken unconsciously. A hidden broken piece of haptic may cause endothelial cell loss and endothelial dysfunction by stimulating cell migration from the central cornea to periphery.¹ We describe a case of unexplained postoperative corneal edema. This case highlights the importance of detailed iridocorneal angle examination, in order to prevent a corneal decompensation.

CASE REPORT

A 70-year-old man presented with a complaint of severe ocular pain and visual loss in his right eye for the last two months. He reported that he had cataract surgery 6 months ago. The best corrected visual acuity (BCVA) was 1 meter in the right eye and 10/10 in the left eye. Intraocular pressure was 12 and 14 in the right and left eye respectively. Ophthalmic examination revealed inferior located corneal edema progressing toward the optical axis with severe epithelial bullous cysts and a dislocated intraocular lens (IOL) which is seen through the undilated pupil. Hyperosmotic agents and topical corticosteroid were initiated. Despite the treatment, corneal edema got worse in a week. Keeping an endothelial touch of a foreign body or a remaining nucleus part in the mind, gonioscopy was performed. Examination revealed a broken haptic piece lying in the inferior iridocorneal angle. The position of the broken haptic did not alter with head position. At this point, removal of the broken haptic and an IOL exchange were planned. The haptic was easily floated out of the anterior chamber using viscoelastic device from the 2.8 mm corneal tunnel. Thereafter, dislocated IOL was cutted using a wannas scissors and exchanged with a three piece foldable IOL. IOL was been implanted to the sulcus. Cornea edema rapidly regressed and IOL was well centralized one week postoperatively (Figure 1). The BCVA was 20/20.

DISCUSSION

The causes for corneal edema after cataract surgery can be divided into these four major categories; mechanical injuries (such as surgical trauma, IOL syndromes, detachment of Descemet membrane, contact with other ocular tissues), inflammation/infection, chemical injury (toxic endothelial cell destruction syndrome) and current eye diseases (primary corneal endothelial diseases, glaucoma).² Mechanical injuries are seen more frequently as a cause of corneal edema postoperatively. Fracture of IOL haptic and pseudophakic fragments is a rare complication of corneal edema due to cataract surgery.³ There are a few reports of corneal decompensation associated with pseudophakic IOL fragments. One report involved a broken haptic from an anterior chamber IOL and the other, a fractured haptic from a single-piece polymethyl methacrylate posterior chamber IOL.^{3,4} Eleftheriadis reported a case who had penetrating keratoplasty as a cause of hidden broken haptic.³ In our case, corneal edema and severe pain consisted 5 months later the cataract surgery. IOL decentration and irregular corneal edema made us to suspect a broken haptic that hidden in the angle. Early diagnose of hidden broken IOL haptic after a cataract surgery prevents a probable corneal decompensation and corneal transplantation. Gonioscopy as well as ultrasound biomicroscopy may be helpful to identify a foreign body in the anterior chamber.⁵

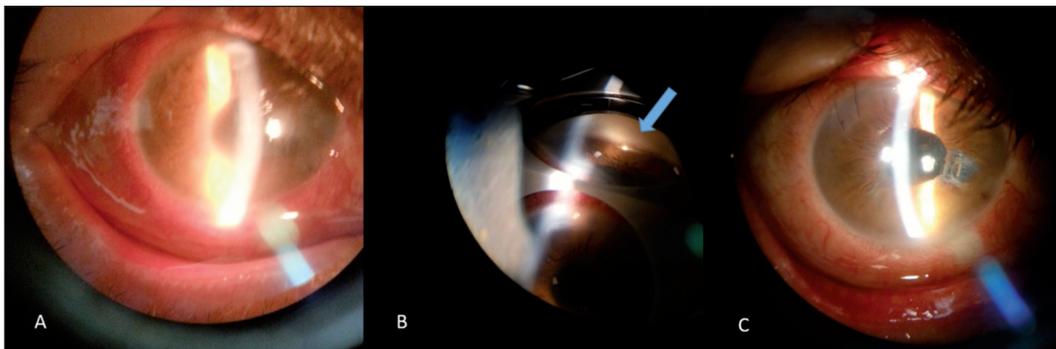


FIGURE 1: A) Figure illustrates corneal edema and dislocated intraocular lens. B) Figure demonstrates broken haptic part in the angle. C) Figure demonstrates clear cornea one week postoperatively.

Conflict of Interest

Authors declared no conflict of interest or financial support.

Authorship Contributions

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