Journal of Clinical & Experimental Ophthalmology

Achiron et al., J Clin Exp Ophthalmol 2015, 6:3
DOI: 10.4172/2155-9570.1000428

Case Blog Open Access

Anterior-Posterior Lens Capsular Phimosis in a Pseudophakic Patient

Asaf Achiron[1,2*], **Fady Haddad**[1,2] **and Uri Hamiel**[2]

[1]Department of Ophthalmology, The Edith Wolfson Medical Center, Holon, Israel
[2]Sackler School of Medicine, Tel-Aviv University, Israel
[*]**Corresponding author:** Asaf Achiron, MD, Department of Ophthalmology, The Edith Wolfson Medical Center, 62 Halochamim St., Holon, Israel, 58100, Tel: +972-3-5028706 ; Fax: +972-3-5028703; Email: AchironAsaf@gmail.com

Received date: Mar 05, 2015, **Accepted date:** Jun 05, 2015, **Published date:** Jun 10, 2015

Case Report

During a routine cataract surgery the anterior portion of the lens capsule is opened and the cataract is removed. The intraocular lens (IOL) is then inserted into the remaining portion of the capsule, which holds the IOL in position. In cases in which the capsule is incapable of holding the IOL (a capsular tear or zonular instability) or in cases where the IOL cannot be inserted into the capsule due to a small anterior capsulorhexis the IOL is implanted in an alternative location: either the ciliary sulcus, or the anterior chamber.

Posterior capsular opacification is the most frequent complication after cataract removal surgery due to epithelial cells migration [1]. Here we present a unique pattern of such capsular opacification due to adhesion between the anterior and posterior lens capsule.

A 76 year-old female with a history of acute angle closure glaucoma underwent a cataract surgery. The eye had a short axial length (22.3 mm) with posterior synechiae and a 4.5 mm dilated pupil diameter. Due to this anatomy a small capsulorhexis was performed, rendering the implantation of the IOL into to the capsule impossible. Therefore, the IOL was inserted in the sulcus, in front of the anterior lens capsule, leaving the capsule empty. With no IOL to act as a barrier inside the lens capsule, epithelial cells migrated and proliferated over both anterior and posterior capsules, leading to central fibrous adhesion and capsular shrinkage (Figure 1).

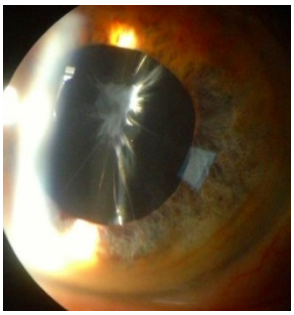

Figure 1: Capsular phimosis may occur following in-bag implantation.

Capsular phimosis may occur following in-bag implantation of IOLs. It typically occurs in patients with pseudoexfoliation, diabetic retinopathy, myotonic dystrophy, retinitis pigmentosa, uveitis, Marfan's syndrome, high myopia or other factors associated with weakened zonules [2,3]. It results in reduction and distortion of the anterior capsular opening. As in our patient, the effect of phimosis is thought to be more prominent when the capsularhexis is small [4].

Preventing the development of capsular phimosis might be achieved by Capsular tension rings, capsule-bending rings, large capsulorhexis (between 5.5 and 6 mm), using a three-piece IOL, making radial relaxing incisions in the anterior lens capsule and thorough cortical cleanup [4-6].

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