Broken Intraocular Lens Haptic: An Interesting Outcome

Abstract
Here by we report the case of a 56-year-old woman, who underwent cataract surgery in both eyes 5 years ago and presented in our clinic with blurry vision in her left eye. Clinical examination revealed entrapped segment of one-piece foldable intra-ocular lens (IOL) haptic on the posterior capsule in her left eye. After discussion with the patient we decided to proceed with YAG posterior capsulotomy. On follow-up examinations over 6 months post YAG capsulotomy, there were no signs of inflammation, IOL was well centered and best-corrected visual acuity was 6/9 in the left eye. This case report highlights a very rare complication of broken IOL entrapped in visually significant posterior capsular opacification and its safe and non-invasive management with yag laser capsulotomy.

Keywords: Intraocular Lens; Broken; Haptic

Introduction
Fracture of an intraocular lens (IOL) haptic is a very rare complication of cataract surgery. It is associated during insertion of the implant or spontaneously after the procedure mostly with scleral-fixated IOLs or anterior chamber IOLs leading to IOL decentration or even more severe complications [1,2]. The spontaneous breakage of a posterior chamber IOL haptic is much more uncommon and there have been reported only very few cases [3-6]. In all these cases PMMA IOLs were involved and the haptic fragment was displaced into the anterior chamber. In this report we present management of an unusual case of broken and entrapped fragment of a one-piece acrylic IOL haptic on the posterior capsule.

Case Report
A 56-year-old woman attended our cataract clinic complaining of blurred vision in the left eye (OS). She underwent uneventful cataract extraction with IOL implantation 5 years ago in both eyes in another hospital. She also had YAG-laser posterior capsulotomy in the right eye (OD) 1 year ago. Her best-corrected visual acuity was 6/9 OD and 6/36 OS. Intraocular pressure was normal bilaterally. On slit-lamp examination there was marked posterior capsular opacification (PCO) in OS, while a YAG laser central capsulotomy was evident OD. However, we were surprised to discover that a foreign body resembling IOL haptic fragment was trapped between the IOL and the posterior capsule OS (Figure 1). Careful examination convinced us that it was a broken IOL haptic, entrapped between the IOL optic and the posterior capsule. Unfortunately, we were not able to contact her surgeon and receive her cataract operation notes.

The patient did not have any visual or other complaints after her cataract surgery and her vision had fully recovered. She only started to experience gradual loss of vision over 6 months prior to presentation, as her PCO in OS became prominent. After discussion with the patient we decided to proceed with YAG posterior capsulotomy in OS. On slit-lamp examination 4 weeks after the procedure, we observed a central YAG laser capsulotomy in the OS with normal findings in the anterior segment (Figure 2). Ultrasound examination revealed presence of the IOL haptic fragment in the vitreous cavity (Figure 3), while the optic and remaining haptics appeared to be stable and well centered. The patient’s best corrected visual acuity (BCVA) was 6/9 OS and she was very happy with the final visual outcome. The patient was reviewed for 6 months post YAG capsulotomy and there were no signs of inflammation, with well centered IOL and stable BCVA of 6/9 OS.

Discussion
Spontaneous fracture of an IOL haptic is an extremely rare complication and is mostly related to scleral-fixated IOLs [2,7,8]. It has been suggested that the characteristic design and material of IOL haptics, e.g. the absence of an eyelet or bulb to affix the suture, instability of the haptic-optic junction, and softness of the jelly-like material, are the main factors predisposing to this complication [8]. There have been only very few cases described of spontaneous fracture of IOL haptic in posterior chamber IOLs [3-6]. In all these cases a PMMA IOL haptic was broken and migrated into the anterior chamber. Eleftheriadis et al. [6] published an interesting case of posterior chamber IOL haptic fracture which resulted in corneal decompensation and the patient required corneal graft surgery. They removed the broken haptic from the anterior chamber and performed scanning electron microscopy. Their findings were consistent with late fracture of the haptic within the capsular bag, which was presumably weakened by an improper implantation technique. Caça et al. [5] published a similar case of a PMMA IOL implanted in the sulcus, which showed spontaneous haptic breakage and migration into the anterior chamber.

In our case, the implanted IOL was of acrylic material and the lens was implanted in the capsular bag. Although the reasons for...
postoperative breakage of the IOL haptic in our patient remain unclear, several factors may be involved, including improper folding and implantation of the IOL. It is interesting that the haptic fragment was entrapped in the space between the IOL and the posterior capsule, causing no visual symptoms until posterior capsular opacification occurred. We considered thoroughly all the options regarding the management of this unusual condition. Finally we decided to proceed with YAG laser capsulotomy, which restored the visual acuity of the patient releasing the haptic fragment in the vitreous cavity. The patient had no complaints on follow up 6 months after the YAG laser capsulotomy. This case reports highlights a very rare complication of broken IOL segment entrapped in visually significant posterior capsular opacification. YAG laser capsulotomy was safe and effective in treating visually significant PCO along with release of broken haptic from the visual axis. There was no evidence of inflammation observed with migration of acrylic haptic in posterior segment and the IOL centration was not compromised.

**References**


