

Traumatic Subconjunctival Dislocation of Fractured Posterior Chamber Intraocular Lens by Cow Horn Injury

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Abstract

Traumatic sub-conjunctival dislocation of posterior chamber intraocular lens is a rare and emergency condition. This communication is to report a rare ocular trauma by cow horn. A 52 year old male farmer presented with history of cow horn injury to his right eye. He had pain redness and decreased vision in his right eye. His posterior chamber IOL which was implanted two years back, was found dislocated to superiotemporal sub-conjunctival space with one broken haptic in anterior chamber and was removed surgically. Such a dislocation has not yet been reported in Indian literature and rarely reported in international literature to the best of our knowledge.

Keywords: Cow horn injury; Ocular trauma; Posterior chamber intraocular lens; Pseudophacocele; Subconjunctival dislocation

Introduction

Intraocular lens implantation is now a days routine practice in management of cataract patients. Previous studies have reported traumatic dislocation of intraocular lens into suprachoroidal space [1], vitreous cavity [2] and subconjunctival space [3-5]. Biedner et al reported subconjunctival dislocation of anterior chamber intraocular lens [6]. Kothari et al reported anterior dislocation of posterior chamber intraocular lens following blunt trauma by cricket ball [7].

Posterior chamber IOL are more resistant to ocular trauma than anterior chamber IOL or iris fixated lens which need increased degree of trauma for dislocation [2]. We report a case of posterior chamber IOL, implanted two years back with completely healed surgical wound, dislocated into subconjunctival space due to blunt trauma by cow horn.

Case Report

A 52 year old male farmer with right sided blunt ocular trauma by cow horn, two weeks before, presented with pain, redness and diminished vision of right eye, which had undergone cataract surgery and posterior chamber intraocular lens implantation two years back.

On ocular examination, best corrected visual acuity of the right eye was counting fingers from two feet distance and, in the left eye was 6/12. Intraocular pressure was measured by goldman applanation tonometer and was 24 mm Hg in the right eye and 16 mmHg in the left eye. The pupil was round, mid dilated and fixed. On Slit lamp examination, right eye revealed old subconjunctival haemorrhage, corneal oedema and deep anterior chamber with rupture of capsular bag.

Posterior chamber intraocular lens was seen in the supero-temporal subconjunctival space (Figure 1) with one broken haptic in infero-temporal quadrant of anterior chamber (Figure 2). The site of scleral rupture was noticed at 11 O'clock of perilimbal area. Fundus detail could not be seen because of corneal oedema. B scan ultrasonography was normal except dislocation of lens from its anatomical position. The slit lamp and fundus examination of left eye were unremarkable except early lental changes.

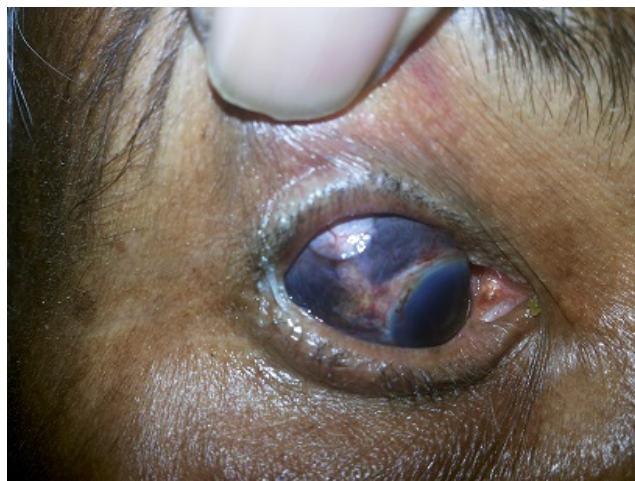


Figure 1: Photograph of the patient showing Subconjunctival dislocation of Posterior chamber intraocular lens.



Figure 2: Photograph showing surgical removal of dislocated intraocular lens.

The dislocated intraocular lens was removed under local anaesthesia through superotemporal peritomy incision [Figure 3] and broken haptic was removed from anterior chamber with anterior vitrectomy through inferonasal limbal incision (Figures 4 and 5). Scleral wound was explored and repaired with 10-0 monofilament suture. There was no iris prolapse. A secondary scleral fixated intraocular lens implantation was performed later.



Figure 3: Removed Posterior Chamber Intraocular lens with one broken haptic.

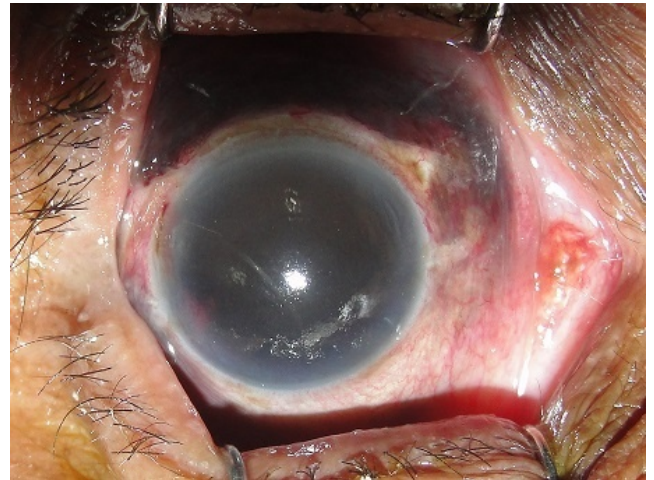


Figure 4: Broken haptic in anterior chamber.

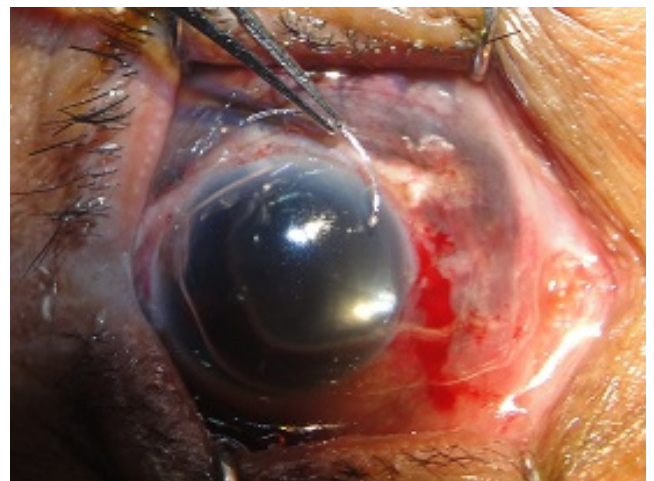


Figure 5: Broken haptic removed from Anterior Chamber.

Discussion

Though blunt ocular trauma caused by cow horn is a rare phenomenon but it can cause severe damage to the eye [8]. The presence of an intraocular lens within eye makes ocular injury more complex. During blunt ocular trauma, the intraocular lens can directly damage the cornea or itself get dislocated, fractured or even expelled out. Post trauma intraocular lens can dislocate to anterior chamber, suprachroidal space, vitreous and subconjunctival space.

The dislocation of posterior chamber intraocular lens is rare as compared to anterior chamber or iris fixation lens. There are many predisposing factors leading to traumatic dislocation of posterior chamber intraocular lens like severity of trauma, implant duration and tensile strength of cataract wound. In comparison to anterior chamber intraocular lens, posterior chamber intraocular lens usually tolerate minor to moderate trauma [2]. Severe impact like cow horn injury is

often associated with globe rupture and dislocation of posterior chamber intraocular lens.

In previous studies [2,4,6] ocular trauma were associated with shortest implant duration where surgical wound did not heal properly and were prone for rupture. However in our case implant duration was two years which was enough for complete healing and adequate tensile strength of surgical wound. Although Koss et al. reported traumatic rupture of the cataract wound 12 years after surgery [9].

Scleral rupture tends to occur in the superonasal quadrant due to projection of energy by impact in the temporal region since impact more frequently occurs here, being unprotected by orbital bone. In our case both scleral rupture and intraocular lens dislocation were found in superotemporal quadrant which is unusual.

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