Anterior Rhino Horn Shaped Cataract

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ABSTRACT

Introduction: Here we would like to report a different morphological type of congenital anterior polar cataract, whose shape closely resembles with the horn of a rhinoceros. Josef Beer in 1917 first described anterior sub capsular cataract as a proliferation of sub capsular epithelium, developing as a clinically evident plaque lying immediately under the capsule. The essential changes are two folds and include an active proliferation of the sub capsular epithelium and a degeneration of lens fibers. In general, such types of cataracts assume three forms: a localized plaque, a raised pyramidal cone and a widespread form extending over considerable areas

Case report: A 54-year-old female, diabetic patient from the northern Indian presented in our OPD with complaints of poor vision in both her eyes. On slit lamp biomicroscopic examination of the dilated left eye, a curved horn shaped white colored structure present slightly temporal to the center of lens was visible. The patient was operated for cataract in her left eye as phacoemulcification with foldable IOL.

Conclusion: On the basis of morphology either its new entity or sub type of anterior pyramidal cataract because its shape resembles with Rhino horn so its named anterior Rhino horn cataract

Keywords: Pyramidal Cataract, Rhino Horn Cataract, Rhinoceros

INTRODUCTION

Various types of congenital cataracts based on morphology have been described in medical literature. Sometimes anterior polar cataracts protrude into the anterior chamber and take inverted cone shaped morphology. Since their structure closely resembles the shape of a pyramid, it is known as an anterior polar pyramidal cataract. Here we would like to report a different kind of congenital anterior polar cataract whose shape closely resembles a rhinoceros horn.

CASE REPORT

A 54-year-old female, diabetic patient from the northern Indian, district of Sitapur reported in the outpatient department of our tertiary care eye hospital with complaints of poor vision in both her eyes. Her vision had been subnormal since early childhood in both her eyes, although she had no previous medical records documenting her visual status.

On examination, the visual acuity in her right and left eyes were 20/120 and 20/200 improving to 20/60 and 20/120 respectively. Rest of the structures anterior to the lens was normal except arcus senilis in both the eyes. On slit lamp biomicroscopic examination of the dilated left eye, a curved horn shaped white colored structure present slightly temporal to the center of lens was visible. The structure was curved towards the center, with its concave surface had faced towards the anterior surface of the lens and convex surface towards the cornea. Anterior tip of the horn was pointed with its thickness was increasing towards the base which was approximately 2×2 mm across in its dimensions. At the base where the horn was joined with the anterior capsule of the lens, a disc shaped opacity 3×4 mm size was present. Beneath this white opacity a clear zone of cortex was present. On slit lamp examination, immature cataract {nuclear plus posterior capsular cataract, grade 2{Lens Opacity Classification System (LOCS) III grading system} was present. In the right eye, a protruded dot like white colored structure was present on the corresponding site with slightly bigger base than the projected part. Immature cataract {nuclear plus posterior capsular cataract, grade 2(LOCS III grading system)} was also present in the right eye. On fundus examination the media was hazy due to cataract in both the eyes (more in the left eye as compared to the right eye) with no apparent diabetic changes in either eye. Intra ocular pressure (IOP) was within normal limits (14 mm Hg with Goldmann applanation tonometer in both the eyes). On retinoscopy, the left eye was slightly hypermetropic as compared to the right eye. The same type of congenital cataract was present in the eyes of her daughter as well but unfortunately, could not be documented.

The patient was operated for cataract in her left eye {phaco-emulsification with foldable intraocular lens (IOL) implantation}.The intra operative photograph is clearly demonstrated the morphology of the cataract resembling a rhinoceros horn (Figure-1).Intra operatively during capsulorrhexis, one interesting observation was that the horn was very easily dislodged from its site along with the base without any deficit in the anterior capsule. Rest of the

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Figure-1: Intraoperative photograph showing the rhino horn shaped cataract in the left eye.

surgery was unremarkable. The best corrected visual acuity in her left eye was 20/60 at six weeks postoperatively, due to amblyopia.

DISCUSSION

The shape of pyramidal anterior polar cataracts is like an inverse cone usually situated on the anterior pole of the lens in the center. Most of time pyramidal anterior polar cataract are congenital in nature or present since birth may be unilateral or bilateral, symmetrical or asymmetrical. They may represent a variant of anterior polar cataract. Such type of lenticular opacity consists of hyper plastic lens epithelium in a collagenous matrix. Patients with pyramidal cataracts are more likely to develop amblyopia.[1] Such cataracts may be inherited, in which case dominant inheritance is the rule.[2] Most of such patients required cataract surgery. In cases of anterior polar cataract causing considerable diminution of vision, the cataract had been detached with a knife and subsequently extracted from the anterior chamber with forceps as described by Selinger.[3] Thomas et.al have reported the dislocation of the pyramidal part of an imprint cataract into the anterior chamber as a rare occurrence.[4] Ghanem et.al have reported a case of dislocation of the pyramidal part of a reduplicated cataract into the anterior chamber causing corneal edema.[5]

CONCLUSION

There are no previous reports of such a type of 'rhino horn shaped' congenital cataract in literature. Although its features resemble those of pyramidal anterior polar cataracts but its morphology in terms of its eccentric site and rhino horn shape are different. This may be an addition to the existing literature with respect to morphological subtypes of pyramidal anterior polar cataracts.

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