

CASE REPORT

In the pursuit of vision

Praveen Dhanapal*, Purendra Bhasin, Manish Panday

ABSTRACT

Background: We report a complex case of ocular trauma which was managed by multidisciplinary specialty strategically for optimal outcomes.

Findings: A 26 yr old man presented to us with a history of sustaining an injury to his left eye in a road traffic accident. At presentation, he had a large central stellate, full-thickness corneal tear with iris loss. Primary laceration repair was done and later he developed refractory glaucoma. There was near total aniridia. This issue was addressed with combined Ahmed glaucoma valve implantation, Aniridia Scleral fixated intraocular lens and limited anterior vitrectomy. His visual acuity finally improved to 6/24 from an accurate projection of the rays.

Conclusion: Ocular trauma is a multidisciplinary specialty. A timely, stepwise and an appropriate intervention can help patients achieve desired outcomes.

Keywords: Ocular trauma, Aniridia Intraocular Lens, Glaucoma

Introduction

Ocular trauma commonly leads to monocular visual impairment/loss. This significantly affects the quality of life of an individual. Especially if the dominant eye is affected. Visual rehabilitation in the Ocular trauma sometimes requires multidisciplinary specialty. This case highlights how complex ocular trauma involving Cornea, Uveal tissue, Crystalline lens and later Refractory glaucoma were managed strategically and stepwise to get optimal outcomes.

Case Report

A 26-year-old male presented to our tertiary care center with the history of injury to his left eye in a road traffic accident. His uncorrected visual acuity was the accurate projection of rays in the left eye and 6/6 in the right eye. There was lid edema with an intact orbital rim. Examination revealed a large stellate full thickness corneal laceration with dense edema, extending from center up to the limbus (Fig. 1). Anterior chamber and lens details were obscured. Uveal tissue and vitreous were found prolapsed on the surface.

There was no reverse Relative Afferent Pupillary Defect (RAPD). Anterior and posterior segment examination of the fellow eye was normal. Computed Tomography (CT) scan Brain and Orbit was normal.

The patient underwent primary laceration repair with limited automated anterior vitrectomy under general anesthesia. Intraoperatively, the crystalline lens was found to be extruded. Seven days after primary repair, the best corrected visual acuity of the patient improved to 1/60. The corneal tear was apposed well and intraocular pressure was within normal limits. There was near total aniridia with just a 3 clock hours of iris tissue (Fig. 2). Corneal edema had reduced significantly. Posterior segment examination was normal.

Over the course of next 10 months, the corneal and retinal status remained stable. However, the patient developed refractory glaucoma. At this stage, the two main concerns that needed to be addressed were glaucoma and aphakia. We chose to proceed with Ahmed glaucoma valve and

Correspondence to:

Praveen Dhanapal

*Consultant, Cornea and refractive surgery, Ratan Jyoti Netralaya, Ophthalmic institute and research centre, 18 Vikas Nagar, Gwalior 474002, Madhya Pradesh, India

Email: pravy128@gmail.com

Full list of author information is available at the end of the article.

aniridia scleral-fixated intraocular lens at the same stage [1].

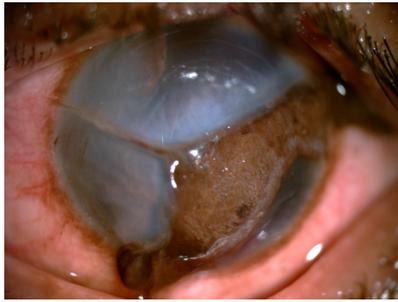


Fig. 1

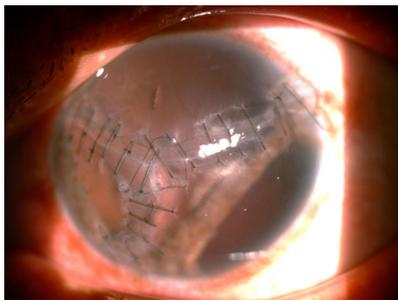


Fig. 2

The valve was placed 8 mm behind the limbus in the superior-temporal quadrant. The tube was cut on approximate size and was tucked under the conjunctiva. An aniridia intraocular lens was placed through a superior sclerocorneal incision of 9.5 mm. Due to the paucity of surgical space, we modified our surgical technique to a single inferior scleral pocket for fixation of the inferior haptic. The superior intraocular lens haptic was secured to the scleral incision with 9-0 prolene suture. Anterior chamber maintainer was used throughout the procedure. Ophthalmic Visco Surgical Devices (OVD) were not used. Limited automated anterior vitrectomy was done and the stump of the iris was also removed. The aniridia intraocular lens has an optic size of 9.5 mm and central visual optic of 5.95 mm. The incision was closed using 10-0 nylon. Next, the AGV tube was released. The valve was reprimed and the tube was placed in the anterior chamber. A corneal patch graft was used to cover the tube and was secured in place with 8-0 nylon sutures. Conjunctiva is closed with 8-0 vicryl sutures and the anterior chamber was reformed.

One week postoperatively, he maintained a BSCVA of 6/24 with normal intraocular pressure. Aniridia lens was well centered. The chances of visual glare and halos were addressed by using the aniridia lens. Posterior segment evaluation was normal (Fig. 3).

At 1 year follow-up, there was a well-functioning valve with a normal anterior chamber and well-centered aniridia intraocular lens (Fig. 4). Intraocular pressure was normal. He maintained a Best Spectacle-corrected visual acuity of 6/24. Patient is currently on tear substitutes and is comfortable without photobia.

Treating a patient with a complex ocular trauma might be very challenging and at times frustrating as well. Both for the physician and the patient. This necessitates a comprehensive approach. Treating physician should communicate with the patient effectively to gain the confidence of the patient. Visual prognosis, the need for multiple surgical intervention have to be discussed with the patient. The patient should be allowed to have a say in the management. Strategic thinking on the part of the treating physicians goes a long way in the management and shall be equally rewarding to both patient and the physician [2].



Fig. 3

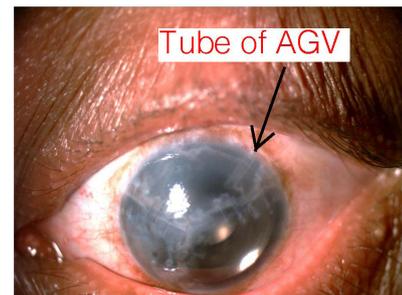


Fig. 4

Finally, we need to know that every cloud has a silver lining. A timely, stepwise and an appropriate intervention can help patients achieve a desired visual acuity.

Financial disclosures

No financial disclosures

Author details

Praveen Dhanapal DNB, Purendra Bhasin MS, Manish Panday MS

1. Ratan Jyoti Netralaya, Ophthalmic institute and research centre, 18 Vikas Nagar, Gwalior- 474002, Madhya Pradesh, India

Received Date: May 15, 2018

Accepted Date: June 16, 2018

Published Online: August 5, 2018

References

1. Spitzer MS, Yoeruek E, Leitritz MA, et al. A new technique for treating posttraumatic aniridia with aphakia first

results of haptic fixation of a foldable intraocular lens on a foldable and custom-tailored iris prosthesis. *Arch Ophthalmol.* 2012; 130(6):771-775. doi: 10.1001/archophthalmol.2011.1778.

2. Kuhn F. Designing the management strategy. In: Kuhn F, Pieramici DJ. *Ocular trauma principles and practice.* Chapter 8.