

Case Report

Paediatric Traumatic Cataract – A Case Report

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ABSTRACT

Paediatric age group is most prone to the injuries as the child develops skills from daily routine to more complex activities. A large number of injuries, however, heal and some may leave a mark. Traumatic cataract is thus, one of the cause of ocular trauma and a preventable vision loss in children, when presented before a permanent damage and complication. This case reports the management of a case of 12 year old female child belonging to rural area with unilateral poor vision following an ocular trauma which was left untreated for four years.

KEYWORDS: Paediatric traumatic cataract, Ocular trauma

INTRODUCTION

During the growing age, a number of children may experience ocular trauma, resulting from mild-moderate to severe ocular injuries. The prevalence of vision loss is variable and thus not be justified in terms of numbers, but depends upon several factors including the socio-economic status, parenting, infant mortality rates of the country and variable periods of overall development of the child¹. Ocular injuries are most common cause of unilateral blindness in the children². A worldwide estimate have shown a total of 19 million children with visual impairment and Asia continent with largest number of childhood blindness of around 1 million³.

Traumatic cataract is defined as an opacification of the lens due to blunt or penetrating trauma to the eye. It can present along with alterations in anterior and posterior segment or as an isolated opacification after a period of time following

the injury⁴. Around thirty percent of childhood and adolescent cataracts are traumatic cataracts, being the most common cause of preventable vision loss^{5,6}.

The exact aetiology and mechanisms of paediatric ocular injuries are uncertain and are in need to evaluate more thoroughly in rural as well as in urban areas. This can help to build sharp strategies and preventive measures to avoid injuries and traumatic vision impairments^{7,8}. The Birmingham Eye Trauma Terminology System (BETTS) encompasses the types and effects of mechanical injury, causes of visual impairments, and visual outcomes after the management in a comprehensive manner and made standardization of documentations^{9,10}. Thus a medical history including demographic features, site and time of injury, previous ocular condition, and follow up durations are of more importance along with the detailed ocular examination when patient presents to the hospital.

CASE REPORT

A 12 years old female child belonging to rural background was presented to Ophthalmology out-patient department with her father after being referred from tertiary centre. She complained of gradual, progressive diminution of vision in the left eye from last four years when she got hit by a blunt object with a high speed and force while playing. She reported no episode of loss of consciousness, nausea or vomiting. Her past medical history and family history were not significant. Though, she did not have history of any other previous ocular injuries, ocular disease, or prior ocular surgeries. She took conservative treatment from a local practitioner and slowly developed blurred vision which progressed with time.

Examination

Ophthalmic examination revealed decreased visual acuity in the left eye. The uncorrected visual acuity was 6/9 in the right eye and perception of light and rays in the left eye. Standard applanation tonometry revealed pressure of 18 mmHg in the right eye and 20 mmHg in the left eye.

Slit-lamp examination of the right eye did not revealed any significant findings. The left eye examination observed no signs of open globe injury. It observed normal ocular adnexa, clear cornea, and normal anterior chamber depth with no cells or flare in the anterior chamber. The pupil was sluggish reactive with posterior synechiae formation at 12, 2 and 6 o'clock. Lens status was rosette shaped dense cataract with dense posterior subcapsular cataract. Gonioscopy observed no angle recession. B-Scan Ultrasonography showed clear vitreous with flat attached retina. On X-Ray and Computed tomography, there were no signs of orbit or skull fracture.

Surgical Procedure

The patient and the family members were thoroughly counselled about the patient's condition, proposed surgical procedure, outcome and intraoperative complications. Patient was taken to operative room with informed and written consent from patient and relatives.

The procedure implied the management of synechiae, cataract with posterior continuous curvilinear capsulorhexis, anterior vitectomy and intra-ocular lens implantation under general anaesthesia (Primary posterior capsular opacity was observed during procedure). The post-operative medications were given as Moxifloxacin with Prednisolone tapering over a period of four weeks. Amblyopic treatment was started and patient was discharged with no ocular complaints.

Outcome

On first follow-up after 7 days, the visual acuity of the patient observed significant improvement. The BCVA (Best Corrected Visual Acuity) for the right eye is 6/6 and of the left eye is 6/18 on the Snellen's chart. Intraocular pressure recordings of the right and left eye were 16 and 18 mmHg.

DISCUSSION

Demographic analysis showed more tendency of paediatric traumatic cataract development in boys than in girls (commonly 6 to 10 years of age) because of their activity level and tendencies toward outdoor play¹¹⁻¹⁴. The relationship between the age range and final visual acuity is still uncertain^{5,14}.

Amblyopia and Strabismus are most common complications of paediatric traumatic cataracts, resulting in lifelong poor vision if not treated properly. Several hypothesis attempted to determine the factors that influence final vision; however, some uncertainties still exist^{11,15}.

CONCLUSION

It has been seen that good visual prognosis of paediatric traumatic cataract has been seen with posterior capsulorhexis, anterior vitrectomy along with intra-ocular lens implantation, followed by effective amblyopia treatment and regular follow-up. However, more comprehensive and prospective studies are needed to confirm this approach.

CONFLICTS OF INTEREST: None

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