

A study of paediatric ocular injuries

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Abstract

Background: The first and the second decade of life ocular trauma forms about 20–50% of all eye injuries approximately 8–14% of total injuries in children below 10 years of age. Forty to sixty thousand of eye injuries lead to visual loss. Despite its public health importance, there is relatively less population-based data on the magnitude and risk factors for ocular trauma, especially from developing countries. Trauma to the eye and ensuing visual disability is an important cause of preventable monocular blindness in the paediatric age group in India. The ensuing visual disability has significant emotional, psychological, and Socioeconomically impact on the individual person, family, and to the society as a whole.¹ Policy decisions helpful in preventing this kind of trauma and improving the required trauma management services warrant an accurate estimate of the pattern of the ocular trauma in Indian population.

Key Words: Paediatric, Ocular, Injuries, Clinical, Demographic.

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INTRODUCTION

Ocular trauma can be considered as a life long suffering and also devastating injury, which can be responsible causing disability for a lifetime in children. This is one of the most important and common factor for loss of vision.¹ Globally 5 lakh injuries occur every year.² This is the reported numbers and there are also so many unreported cases. This may be easily one of the most important fields which has to be controlled. The total number of cases in India at present was reported as 2.4%.³ Throughout the world there are approximately 1.6 million people blind from eye injuries, 2.3 million bilaterally visually impaired, and 19 million with unilateral visual loss.⁴ It is also very preventable, perhaps a little care would make sure of the prevention of the injuries.⁵ The first and the second decade of life ocular trauma forms about 20–50% of all eye injuries⁶ approximately 8–14% of total injuries in children below 10 years of age.⁷ Forty to sixty thousands of eye

injuries lead to visual loss.⁸ Despite its public health importance, there is relatively less population-based data on the magnitude and risk factors for ocular trauma, especially from developing countries.⁹ Trauma to the eye and ensuing visual disability is an important cause of preventable monocular blindness in the paediatric age group in India. The ensuing visual disability has significant emotional, psychological, and Socioeconomically impact on the individual person, family, and to the society as a whole.¹⁰ Policy decisions helpful in preventing this kind of trauma and improving the required trauma management services warrant an accurate estimate of the pattern of the ocular trauma in Indian population.¹¹ Most of our understanding of this issue is based on the studies from developed countries^{12,13,14}

AIMS AND OBJECTIVES

To evaluate the paediatric ocular injuries.

MATERIALS AND METHODS

This study was done in the Department of Ophthalmology, Karwar Institute of Medical Sciences.

This study was done from August 2019 to Jan 20.

This study was done by observing 30 patients that we treated in the Department.

Inclusion Criteria:

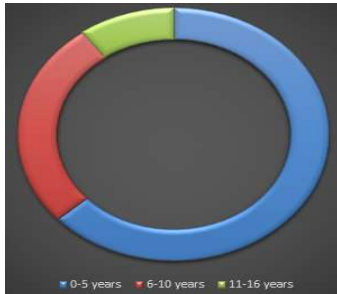
Patients below 16 years

Exclusion Criteria:

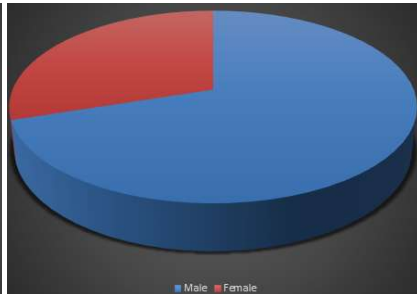
Past ocular pathology.

Patients on immunosuppressant and anticancer treatment.

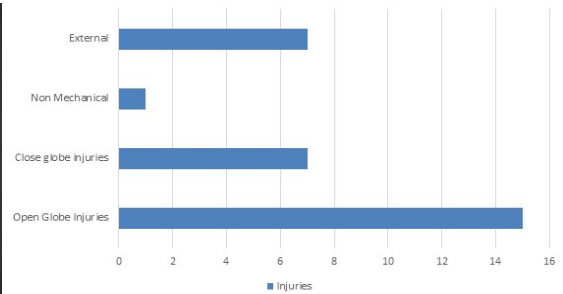
RESULTS



Graph 1: Age Distribution



Graph 2: Sex Distribution

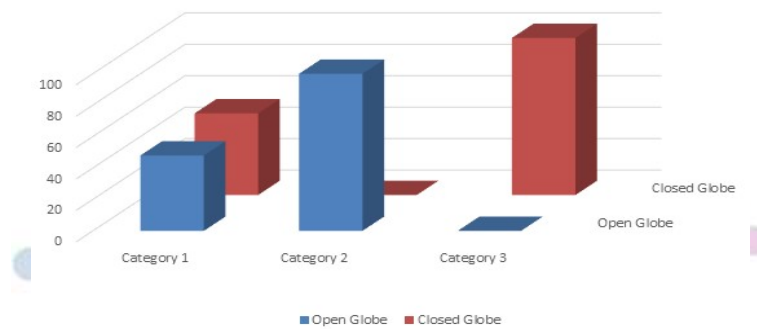


Graph 3: Injuries

Table 1: Materials causing the Injury

Material	Frequency
Stick	11
Stone	13
Key	02
Dog bite	01
Hook	02
Ball	02

Table 2: Zone of Injuries According to BETT (Birmingham Eye Trauma Terminology)



Graph 3

DISCUSSION

Eye injuries per Birmingham classification (Birmingham Eye Trauma Terminology) BETT are divided into closed and open eye injuries.^{15,16}. Zones of injuries for closed globe injury (based on location of injury)- Zone 1: external (limited to bulbar conjunctiva, sclera and cornea) Zone 2: anterior segment (including posterior lens capsule including pars plicata) Zone 3: posterior segment (all internal structures posterior to the posterior lens capsule). When our study was compared with other studies. Age- in our study majority were in between 6-10 yrs. (42%), in Rohit Saxena *et al.*³¹ Study 5 years and older (87%) and in Saha *et al.*³² 6-10 yrs. (47%). Sex- majority were boys in our study 68% which is comparable to Rohit Saxena *et al.*³¹ 63% and Saha *et al.*³² 63% studies. Type of injury- in our study 34% and 33%, in Rohit Saxena *et al.*³¹ 53% and 42% and in Saha *et al.*³² 53% and 32% open and closed globe injury respectively. Object causing injury- stick is most common object causing injury in our study. bow and arrow and sharp objects in Rohit Saxena *et al.*³¹

and Saha *et al.*³² studies respectively. Place of injury- playground/outdoor is most common place in ours and above two studies. The role of ocular injuries secondary to head trauma in the causation of blindness has become a subject of immense importance. TBI leads to neurocognitive deficits such as impaired attention, inability to perform visuospatial associations and psychological health issues. TBI is considered a silent epidemic as society is unaware of magnitude of the problem. The manifestations of head injury and its numerous other systemic complications are so compelling that damage to the visual system is most likely to be ignored. Many a times, when the eye is examined as part of neurological assessment of a patient with head injury, the purpose is mainly to gauge the severity of the head injury itself. Many hypotheses have been advanced to explain the cause of head injuries, but most of these hypotheses have remained untested and unproven. When we compare with other study the following can be compared.

	Nailini S	Rohit Sexena <i>et al.</i>	Saha <i>et al.</i>
Boys	6-10yrs. (42%)	5& older (87%)	6-10yrs. (47%)
Type pf injury (Open & closed respectively)	68%	63%	63%
Object causing injury	34% & 33%	53% & 42%	53% & 32%
Place of injury	Stick	Bow and arrow	Sharp Object
Presenting interval	Platground/outdoor	Outdoor	Playgroud
	<6 hrs.	>24 hrs	>24 hrs.

CONCLUSION

This is the most common and preventable type of injury. So utmost important should be given to this field by educating people and also prompt treatment should be initiated as soon as the patient lands in the OPD.

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