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A study of the etiology, socio demographic profile and visual outcome of traumatic cataract in Bangalore – Rural

Dr. T S Vijay Kumar*
Assistant Professor, Department of Ophthalmology, Akash Institute of Medical Sciences and Research Centre, Devanahalli, Bangalore, Karnataka, India
*Corresponding Author

Dr. Surendra H R
Professor and HOD, Department of Ophthalmology, Akash Institute of Medical Sciences and Research Centre, Devanahalli, Bangalore, Karnataka, India

Dr. C N Gupta
Professor, Department of Ophthalmology, Akash Institute of Medical Sciences and Research Centre, Devanahalli, Bangalore, Karnataka, India

***Abstract*---**Purpose: To study the Etiology, Socio-Demographic profile and Visual outcome of Traumatic Cataract in Bangalore Rural. Materials and Methods: This cross- sectional study was done on 50 patientswho presented in Department of Ophthalmology from June 2021 to Dec 2021. Relevant clinical history, visual acuity and demographic data at time of presentation and post operatively after 2 months were recorded. All the data was compiled and managed in SSPS. Results: Among 50 patients, majority of patients were young adults between 21-30 years. Males were affected more than females.The major cause was wooden stick trauma. Most of the patients had penetrating eye injury [n=35, 70%] and poor visual acuity at presentation. Conclusion: Due to engagement in outdoor activities, males face increased risk of trauma. Because of other complications like corneal opacity, scarring and irregular astigmatism, visual outcome post operatively was poor.

***Keywords*---**Traumatic Cataract, Penetrating injury, wooden stick

Introduction

Ocular injuries can occur in all age groups. It could be due to blunt trauma from a tennis ball, hand or penetrating injury from pencil, pen or wooden stick. The most common complication is traumatic cataract. Some other complications

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which can occur are Hyphema, Uveitis, Iridodialysis, Macular edema, retinal Detachment and vitreous hemorrhage. .Vossius Ring, concussion cataract, Rosette cataract, subepithelial opacities can also occur. Everyone is prone for trauma, especially children who are engaged in sports and adults who work in stone chipping, glass industry and those working in fields.

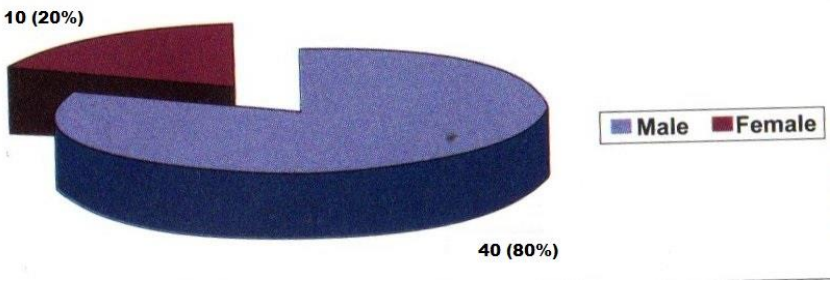
Cataract is most common complication and major cause of morbidity following Ocular injury. Males are more susceptible for ocular injury. The incidence of ocular injury has been studied from time to time in different geographic location in both urban and rural setting.

Materials and Methods

This is a prospective hospital based study done on 50 patientswith traumatic cataract following blunt and penetrating ocular trauma who attended the Ophthalmology department of Akash institute of medical sciences and research centre, Bangalore rural during June 2020 to December 2020. Informed consent was taken from all patients and parents in the case of children. All traumatic cataract patients were operated on by asingle surgeon, by single procedure [small incision cataract surgery] in same institution. Some demographic data like [age, sex, occupation, residence] and nature of injury, object with which injury took place were noted. Penetration0f ocular coats decided whether the injury was classified as open or closed. Visual acuity was noted at time of presentation. It was assessed by Snellen chart. B-scan and Xray were performed, based on severity to rule out intraocular foreign body and posterior segment evaluation. Patients were followed up for two months. All data was compiled and evaluated.

Table 1: Distribution according to age group

Age Group (year)	Number of cases	Percentage (%)
0-10	11	22
10-20	8	16
21-30	15	32
31-40	8	16
41-50	5	10
> 50	3	6



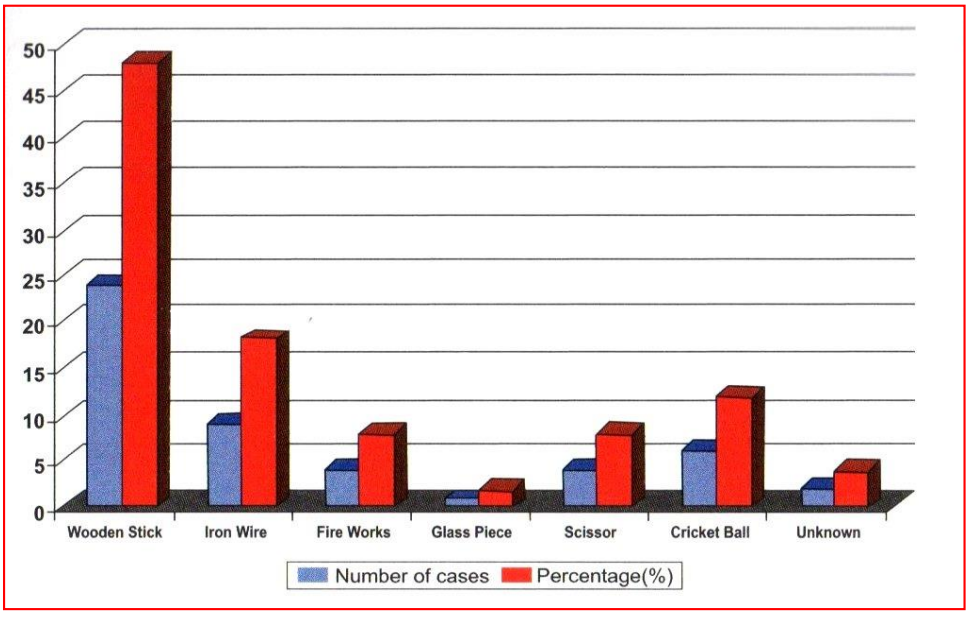
Graph 1: Distribution according to gender

Results

Traumatic Cataract patients were more in the younger age group (21-30 yrs) – 15(32 %), next were children (0-10 yrs) 11 –(22%). and frequency decreased with subsequent increase in age. In our study, 40 (80 %) were male, compared to 10 (20%) females. This closely resembles data found by Shah et al. The reason could be the outdoor work done by males. Farmers and agricultural workers were more likely to get injured. Agricultural workers were young and had suffered penetrating eye injuries. Most common trauma was wooden stick 24 (48%) Graph 2 Most of the patients had poor visual acuity and post op visual outcome was good only if they had no complications like lens subluxation, corneal opacity and retinal detachment.

Table 2: Distribution according to occupation

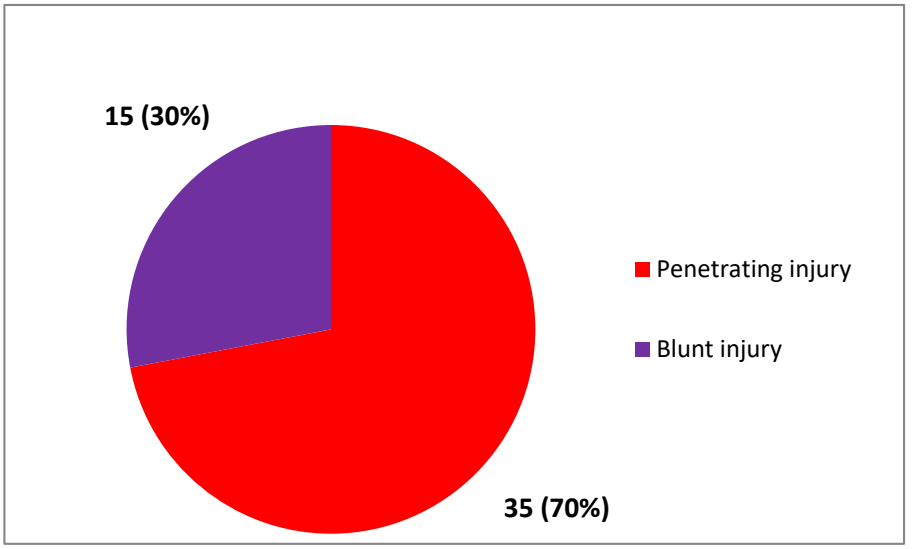
Occupation	Number of cases	Percentage (%)
Farmer/agriculture worker	22	44
Industrial Worker	9	18
Children (while Playing)	12	24
House wife	3	6
Others	4	8



Graph 2: Configuration of cases according to object by which trauma has occurred

Table 3: Visual acuity at time of presentation

Visual Acuity at Presentation	Number of Cases	Percentage (%)
>6/60 to 6/60	6	12
<6/60 to HM-CTF	24	48
P1 and PR	16	32
PL ABSENT	4	8



Graph 3 Type of injuries

Table 4: Visual acuity at 2 months

Visual Acuity	Pre- operative	Percentage (%)	Postoperative Percentage at 2 Months	Percentage (%)
PL	8	16	2	4
1/60-<3/60	11	22	8	16
3/60-<6/60	28	56	17	34
6/60-6/24	3	6	12	24
>6/18	0	0	11	22

Discussion

Most common cause of unilateral blindness is trauma. It is a major cause of visual impairment in adults and children. In our study, young adults and children were affected the most. Male preponderance was found. It was due to involvement in sports, outdoor activities and occupational hazards. Srivastava et al also found that males were comparitively more affected and wood stick injury was most common agent.

In our study, majority of patients had poor visual outcomes, less than 6/60 postoperatively at 2 months. It was due to penetrating eye injury and post operatively associated corneal opacity.

Limitation

Main limitation of this study was sample size and conduct of the study in single tertiary health care centre. It gives idea of local socio-demographic conditions but cannot be generalized and long term follow up was not done

Conclusion

Poor visual outcomes are associated with penetrating injuries. Protective eye gears and careful use of sharp objects can prevent development of Traumatic Cataract

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