

Pattern of Ocular Trauma in a Tertiary Referral Hospital in South Tamil Nadu

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Abstract

Introduction: Trauma is an important causative factor of ocular morbidity. It is one of the common causes of preventable blindness in our Indian population.

Aim: To assess the pattern of ocular trauma causes and management done at Government Theni Medical College Hospital.

Materials and Methods: A retrospective study was conducted from May 2015 to April 2016 in 300 patients with ocular trauma who presented to casualty at Government Theni Medical College, Theni. We recorded the data based on the nature and cause of injury, time of injury, and time interval between injury and reporting to the hospital. The data were analyzed statistically by simple proportion.

Results: Of 300 patient examined, the most common age group was 25-35 years, more predominant in males. The most common cause being road traffic accidents. Most of the patients were managed with suturing and conservatively.

Conclusion: Our study shows a male preponderance and the most common age group being 25-35 years. The most common cause of ocular trauma is road traffic accidents followed by assault. Hence, there is an urgent need for reinforcement of traffic rules and people should adhere to them. The urgent need for more ambulance services to bring the patients to the nearby hospital as soon as possible and first aid training to paramedical workers, enhancing the facilities available at the emergency centers will go a long way in preventing disability and visual loss to the public.

Key words: Ocular trauma, Road traffic accidents, Subconjunctival hemorrhage

INTRODUCTION

Ocular injury is an avoidable cause of blindness and visual impairment. According to the WHO, 55 million eye injuries restricting activities occur for more than 1 day each year. 750,000 cases require hospitalization which includes 200,000 open globe injuries.¹ Ocular trauma usually occurs in the younger individuals and road traffic accidents are a more common. Our Government Theni Medical College is situated in a National Highway. Hence, we designed this study to determine the pattern of ocular trauma, its causes, and effective management.

MATERIALS AND METHODS

A retrospective study was done at Government Theni Medical College from May 2015 to April 2016 on 300 patients who presented to the casualty, emergency, and trauma department. The patients who already had eye diseases such as glaucoma and operated eyes were excluded from the study. A thorough ophthalmic examination was done which included visual acuity measurement by Snellen's chart, slit lamp examination to evaluate anterior segment injuries and fundus examination by IDO and slit lamp biomicroscopy. Intraocular pressure was measured except in open globe injuries. The data collected included age, sex, place, and date and time of trauma, cause of injury. The data were finally analyzed statistically by simple proportions.

RESULTS AND DISCUSSION

In our study, out of 300 patients, 80% of the patients belonged to the age group of 25-35 years. 71% of them

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were males and 29% of them were females. As specified by the previous studies our analysis too showed a male preponderance (Table 1).²

The most common pattern of injury was found to be subconjunctival hemorrhage followed by lid trauma. A few cases of periorbital hematoma were noticed. A very few cases of open globe injury were recorded (Table 2).

Regarding the causes of ocular trauma, road traffic accidents formed the major bulk of causes, followed by assault (Table 3). This might be due to the reason that our Medical College is situated in a national highway.

About 16% of the patients were brought to the hospital within 24 h of injury. 52% of the patients were brought to the hospital within 24-48 h of injury and 28% of the patients were brought within 48 h - 1 week. 4% were brought after 1 week of injury (Table 4).

Most of the patients with subconjunctival hemorrhage (77%) were treated with topical antibiotics, steroid drops, and anti-inflammatory drugs and those who had laceration of lid (20%) were sutured, those with open globe injuries underwent repair with microsurgical techniques (3%) when compared to He *et al.*³ who managed 52.6% with surgery and 22.2% conservatively.

The majority of our patients presented with good vision (69%) and 3% of them had visual impairment (Table 5). This might be due to the reason that most of them were closed globe injuries and were brought to the hospital earlier.

However, according to Omolase *et al.*,⁴ 50.8% had a visual acuity ranging from 6/18 to 6/6, 32.6% <3/60. As per the study conducted by Iqbal *et al.*,⁵ 81.1% had a visual acuity <3/60 and 12.2% had a visual acuity 6/60-6/18. As our study had a lesser degree of penetrating injuries, patients presented to us with a better visual acuity. Our hospital is easily accessible to the patients, so most of them were brought without delay. This might be the reason for a lesser damage to the ocular system.

CONCLUSION

Our study shows a male preponderance and the most common age group being 25-35 years. The most common cause of ocular trauma is road traffic accidents followed by an assault. Hence, there is an urgent need for reinforcement of traffic rules and people should adhere to them. The urgent need for more ambulance services to bring the patients to the nearby hospital as soon as possible and

Table 1: Age distribution

Age group (years)	Number of patients (%)
<5	12 (4)
5-15	12 (4)
15-25	60 (20)
25-35	120 (40)
35-45	48 (16)
45-55	24 (8)
55-65	24 (8)
>65	Nil (Nil)

Table 2: Pattern of trauma

Type of injury	Number of patients (%)
Contusion	12 (4)
Periorbital hematoma	24 (8)
Lid trauma	60 (20)
Subconjunctival hemorrhage	195 (65)
Open globe injury	9 (3)

Table 3: Causes of injury

Cause	Number of patients (%)
Road traffic accident	180 (60)
Assault	108 (36)
Accidental fall	12

Table 4: Duration of presentation

Duration	Number of patients (%)
<24 h	48 (16)
24-48 h	156 (52)
48 h-1 week	84 (28)
>1 week	12 (4)

Table 5: Visual acuity

Visual acuity at presentation	Percentage
<3/60	3
3/60-6/60	6
6/60-6/18	22
6/18-6/6	69

first aid training to paramedical workers, enhancing the facilities available at the emergency centers will go a long way in preventing disability and visual loss to the public. People can be educated using media and health education and awareness regarding first aid measures and safety precautions for ocular trauma will help us to bring down the visual impairment caused by ocular injuries.

REFERENCES

- Desai P, MacEwen CJ, Baines P, Minassian DC. Epidemiology and implications of ocular trauma admitted to hospital in Scotland. *J Epidemiol Community Health* 1996;50:436-41.

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2. Olurin O. Eye injuries in Nigeria. A review of 433 cases. *Am J Ophthalmol* 1971;72:159-66.
3. He MZ, Liping M. Epidemiology of patients hospitalised for ocular trauma in the Chaoshan Region of China 2001-2010. Vol. 10. *Injury Prevention Research Centre Medical College of Shantou University*; 2012. p. 1371.
4. Omolase CO, Omolade EO, Ogunleye OT, Omolase BO, Ihemedu CO, Adeosun OA. Pattern of ocular injuries in OWO, Nigeria. *J Ophthalmic Vis Res* 2011;6:114-8.
5. Iqbal CJ, Khan KR. *Visual Outcome after Surgical Management in Penetrating Ocular Trauma*. Lahore: King Eduard Medical University, Mayo Hospital; 2011.

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