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Original article:

A clinical study of ocular trauma in the district of kannauj of Uttar Pradesh

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Abstract

Introduction: Evaluation of cases of ocular trauma that presented at OPD of Government Medical College, Kannauj, UP.

Material and methods : This study was undertaken at the Department of Ophthalmology, Government Medical College, Kannauj, UP from 1st November 2014 to 30th September 2015 and included patients of ocular injury admitted to this hospital during this period. A detailed history and complete ocular examination. Relevant investigators were done wherever necessary. Patients were treatedmedically and surgically, if required.

Results : Our study found a male preponderance in ocular trauma cases, with male-female ratio 3:1 and greater percentage of cases in the younger age group (11-20--**42.7%**& 21-30-**26.8%**).

Industrial workers (39.2%) and students were the most commonly observed groups who suffered from ocular injuries. Complex patterns of trauma were observed; including lacerations,hematomas,blunt injury and sclera tear. Visual activity of many patients was affected. The cases were managed conservatively by Cycloplegics and Topical steroids and few needed surgery.

Conclusion : Ocular trauma is a preventable cause of loss of vision worldwide;more common in young population like students and industrial workers. Simple measures like protection for eyes while welding, playing sports and strict traffic regulation are necessary to prevent ocular trauma.

Key words : Ocular Trauma, Workers, Occupational, Blindness

Introduction

The recognized leading cause of unilateral blindness is ocular trauma.It is an important cause of visual loss across the globe.[1] Over 2.4 million eye injuries occur each year.[2] One out of 20 patients presenting to the ophthalmologist has an ocular injury.[3]Prevention is always better than cure. Measures should be taken to create awareness about ocular trauma and manage the cases appropriately, so that visual acuity is maintained, Compared with any other organ of the body- the effect of eye injuries is far more devastating considering the delicate structures the eyes are made up of. There is profound social, economical, occupational and medico legal consequences of ocular trauma. [4]

This study was conducted in the department of ophthalmology, Government medical college, Kannauj to analyze the clinical profile and visual outcome in ocular trauma cases.

Material and methods

This prospective case study was carried out at the Department of ophthalmology, Government Medical College, Kannauj from 1st November 2014 to 30th September 2015.

Inclusion criteria

Patients with ocular injuries admitted to the hospital in the Ophthalmology department

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between 1st November 2014 to 30th September 2015.

Exclusion criteria

Patients with past intraocular surgeries and those with preexisting ocular pathologies and visual impairment were not included.

A detailed history with ocular examination was performed. Snellen visual acuity was taken in each case. All the patients were examined under Slit lamp, Direct ophthalmoscope or Indirect ophthalmoscope. Tonometry was done as per requirement. Examination under anesthesia was done for small, non cooperative children or handicapped patients

Traumatic iritis - was treated with topical steroids and cycloplegics.

Corneal tears and Scleral tears were sutured with 10 '0' nylon and Vicryl 6 '0' respectively

Severely disfigured globes with no vision were eviscerated after taking consent. Ruptured Lenses with Corneal tears were irrigated primarily with secondary IOL implantation.

Vitreoretinal cases were referred elsewhere due to lack of such facility in our hospital.

Patients were followed up for 6 weeks to 3 months.

Complex patterns of trauma were observed and documented as follows:-

(1) Eye Wall—Cornea and Sclera.
(2) Closed Globe Injury—No full thickness wound of the eyeball
(3) Contusion—No full thickness wound(Direct injury lead to Choroidal rupture, Vitreous hemorrhage and retinal detachment)
(4) Open Globe injury—Full thickness wound of the eyeball
(5) Laceration—Full thickness wound by Sharp objects.
(6) Perforation—Entrance and Exit wound
(7) Adnexal injuries—Eyelid and Conjunctival injuries.

Results

The Age distribution, Study shows following results.

AGE (in years)	MALES	FEMALES	TOTAL
< 10	02	01	3(5.35%)
11-20	20	04	24(42.9%)
21-30	10	05	15(26.8%)
31-40	06	01	7(12.6%)
41-50	02	01	3(5.35%)
51-60	01	01	2(3.5%)
>60	01	01	2(3.5%)
TOTAL	42	14	56

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Sex distribution

SEX	NO.OF PATIENTS
Males	42(75%)
Females	14(25%)
TOTAL	56

Occupational distribution

OCCUPATION	NO.OF PATIENTS
Student	12 (21.4%)
Agriculturist	08 (14.2%)
Industrial worker	22(39.2%)
Labourer	06(10.7%)
Housewife	O5 (8.9%)
Miscellaneous	03(5.6%)
TOTAL	56

Distribution of ocular trauma in relation to visual acuity

Pattern of ocular injury	Visual acuity of affected eye			
	6/6-6/18	<6/18-6/60	<6/60-3/60	<3/60
Laceration	04	02	12	08
Periorbitalhematoma	02	02	08	03
Blunt injury	02	01	03	02
Sclera tear	01	01	02	01
Foreign body	01	00	01	00
TOTAL	10	06	26	14

Discussion

Ocular trauma is an important cause of morbidity and blindness. Most studies of prognostic indicators in ocular trauma were carried out in more developed countries[5] There are few studies related to this topic in less developed countries[6] .In our study, we found Male/ Female ratio was 3:1 and greater preponderance of patients were in 10-30 years age group. The explanation for this could be greater risky lifestyle and occupational hazards for males as compared to females.[7,8] As reported by other studies our patients belonged to young and active age group. Among occupational injuries, maximum cases were industrial workers and farmers. Among students, most common cause of injury was found to be road traffic accidents or recreational activities like sports.The major objects causing ocular trauma were stones, wooden sticks, vegetative foreign bodies, metal rods and glass pieces. This is consistent with studies carried out in Lahore[9] and Sir ganga Ram hospital (Delhi)[10]

The visual acuity of the injured eye on admission of patients-showed that majority of

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patients with Visual acuity of < 6/60—3/60, followed by visual acuity of < 3/60 and than by 6/6 –6/18. These findings are similar to those of C. Omolase et al[11] .The management mostly performed was based on steroids and anti-inflammatory drugs. It was found that patients with Lid injury like lid laceration caused by blunt objects was strongly associated with visual loss Rahaman et al[12]also reported that lid laceration and adenexal trauma were associated with worse visual outcome and higher rate of enucleation

Conclusion

This study describes male preponderance in cases of ocular trauma. This is also evidence that most of the accidents take place in the workplace of patients.There is a need for strict reinforcement of traffic rules and safety protocols in industries. Simple safety measure like wearing seat belts, protective goggles during welding, supervising children while playing etc. should be advocated in mass media. Good training of ophthalmologist to deal with cases of ocular injury will go a long way to prevent visual loss due to ocular injury.Thus our study emphasizes need for heath education --regarding ocular trauma and preventive measures at workplace.

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