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Pattern of Ocular Trauma in Al-Hussein Hospital

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Abstract:

Objective: To determine the pattern of ocular trauma and subsequent visual impairment in Al-Samawa city general hospital.

Design: Hospital based prospective descriptive study

Method: The subjects underwent a detailed interview and ocular examination for anterior and posterior segment.

Results: 39 of patients were male and 24 were female. the mean age was 24.83±15.456. There were (39.7%) blunt trauma, (23.8%)sharp object, (25.3%)foreign body ,(4.8%)contact lens , (1.6%)bullet injury,(1.6%)chemical injury, (1.6%)glue instillation, (1.6%)tooth extraction. according in visual acuity (77.8%)were good to mild , (11.1%)were moderate,(9.5%)were severe,(1.6%) were blind.

Conclusion: High percentage of ocular injuries are closed injuries occurring in workplaces suggesting the need to explore work place strategies to minimize ocular trauma as priority .

Large percentage of ocular trauma in children suggest the need for educational program in avoiding commercially available sharp ended toys and more family instructions to give more care for their children.

Key words: Ocular Trauma, visual impairment, hospital.

INTRODUCTION

Trauma is an important cause of ocular morbidity. The pattern of ocular injuries tends to vary from one location to another and is affected by the activities of residents in a particular location.[1] Some individuals by virtue of their job are prone to ocular injuries and certain activities of daily living increase the risk of eye trauma due to exposure to hazards.[2] Most eye injuries are avoidable, and a greater proportion is believed to be superficial in nature and transient in their effects. However, serious eye injury requiring hospitalisation gives rise to irrevocable structural damage or functional loss most times. For the afflicted person (usually in the active years of life) the visual, vocational and economic consequences are quite enormous. For the injured eye [3]. The most common cause of unilateral blindness in paediatric age groups, especially in developing countries, is ocular trauma[4]. It is simply preventable by the supervision of the parents and baby caregivers [5] The spectrum of ocular injuries ranges from the very mild non-sight threatening to extremely serious with potentially blinding consequences. Based on the more comprehensive Birmingham Eye Trauma Terminology system (BETTS) [6] , recent studies [7] have classified open-globe injury types as rupture,

penetrating, intraocular foreign body, perforating and mixed; closed-globe injury types, as contusion, lamellar laceration, superficial foreign body and mixed. The rationale for classifying ocular trauma is to determine and document severity of injury. It also provides a standardised description and terminology for the injury, which is internationally accepted and understood. The type and extent of damage sustained by a traumatised eye depends on both the mechanism and force of the trauma[8]. Common consequences of ocular blunt trauma include periocular lid ecchymosis/ haematoma, orbital fractures, subconjunctival haemorrhage, corneal abrasions/ulcers, hyphaema, cataracts, lens dislocation/ subluxation, contusions, retinal detachments and globe rupture. Penetrating/ perforating injury could lead to lacerations of the eyelids, cornea or sclera which may be associated with intraocular haemorrhage, retained foreign bodies or tractional retinal detachment [8]

PATIENTS AND METHOD

This prospective cross-sectional descriptive study was carried out at the emergency units in Al-Muthanna,Iraq.During 6 months period September February. cases were analysed with respect to 1) Age 2) gender 3) nature and type of traumatic agent 4)visual acuity during presentation

We did slitlamp examination to all patients, with anterior and posterior segments assessment. And did a B-Scan ultrasonography for whose needed. And measure IOP to ensure if they have glaucoma. And then follow up who needed surgery .

RESULTS

A total of 63 patients were included in the study.20 (31.7%)of them were at the age group 21-30 years old,15 (23.8%)of them were at the age group less than 10years old ,14 (22.2%)of the were at the age of 31-40 years old ,9 (14.3%)of them were at the age group 11-20,5 (7.9%)of them were above the age of 40 years old .39 (61.9%) of ocular trauma occurred men 24(38.1%)of ocular trauma occurred in female .

There were 25(39.7%)blunt trauma, 15(23.8%) sharp object, 16 (25.3%) foreign body, 3 (4.8%)contact lens ,1 (1.6%)bullet injury,1 (1.6%)chemical injury,1 (1.6%)glue instillation,1 (1.6%)tooth extraction.according in visual acuity 49 (77.8%)were good to mild , 7(11.1%)were moderate,6(9.5%)were severe.1(1.6%) were blind

Mean	24.83
Std. Deviation	±15.456

Table (1) The mean and standard deviation of the patient's age

Age group	Frequency	Percent
< 10	15	23.8
11 – 20	9	14.3
21 – 30	20	31.7
31 – 40	14	22.2
> 40	5	7.9
Total	63	100.0

Table (2) Patients distribution according to age group

Type and nature of agent	Frequency	Percent
Blunt trauma	25	39.7
Sharp object	15	23.8
Foreign Body	16	25.3
Contact lens	3	4.8
Chemical Injury	1	1.6
Glue Installation	1	1.6
Bullet injury	1	1.6
Tooth extration	1	1.6
Total	63	100

Table (3) Nature and type of agents

	Frequency (%)	
Visual acuity	At presentation	After treatment
6/6 - 6/18	49 (77.8)	49 (77.8)
6/18 - 6/60	7 (11.1)	7 (11.1)
6/60 - 3/60	6 (9.5)	6 (9.5)
< 3/60	1 (1.6)	1 (1.6)
Total	63 (100)	63 (100)

Table (4) Patients distribution according to Visual Acuity

Corneal foreign Body	Frequency	Percent
Metal foreign Body	4	25
Woody Foreign Body	5	31.3
Other Foreign Body	7	43.7
Total	16	100

Table (5) Frequency of corneal foreign body

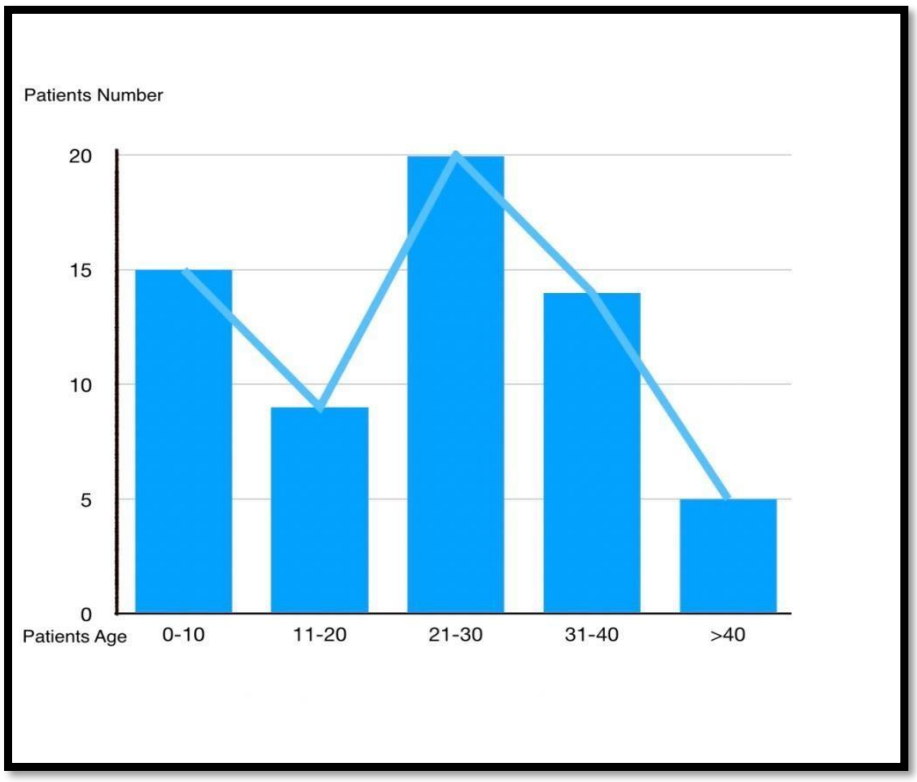

Figure (1) Patients distribution according to Age of patients

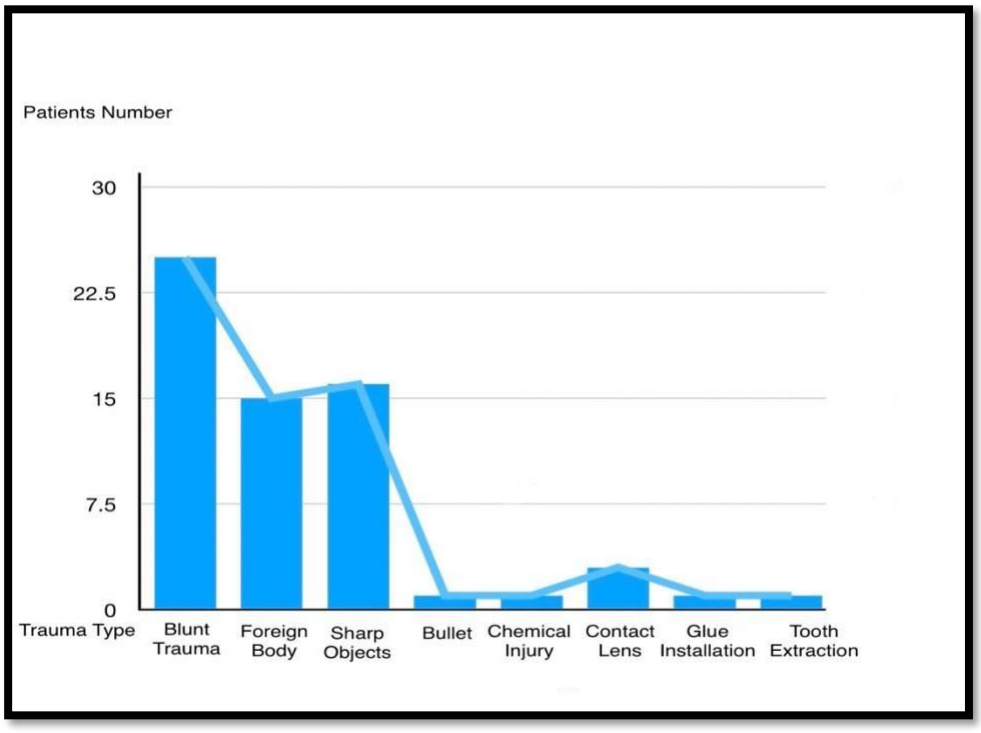

Figure (2) Patients distribution according to type of trauma

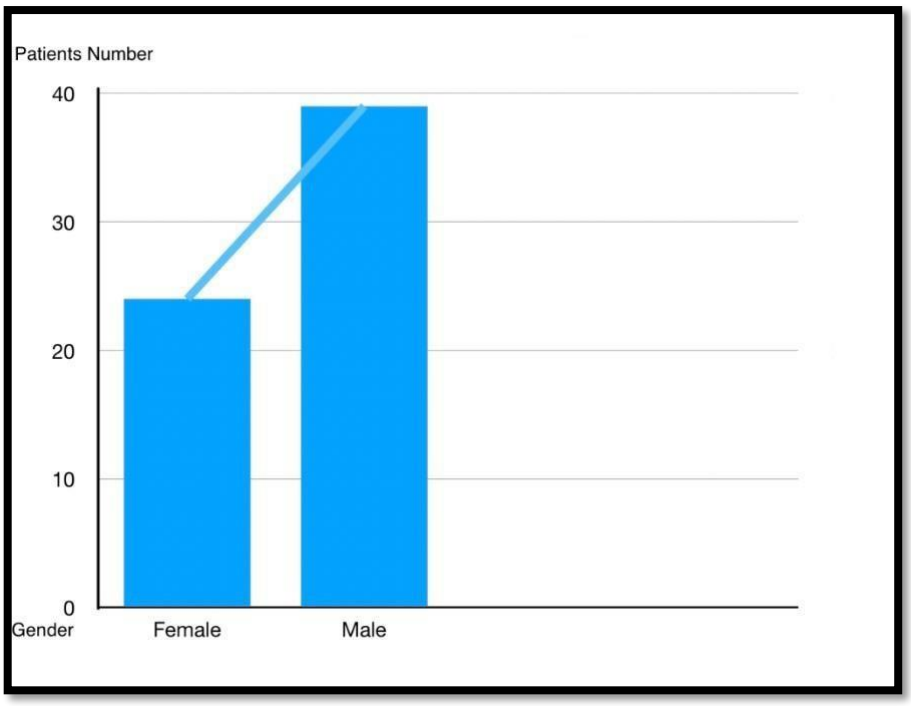

Figure (3) Patients distribution according to Gender

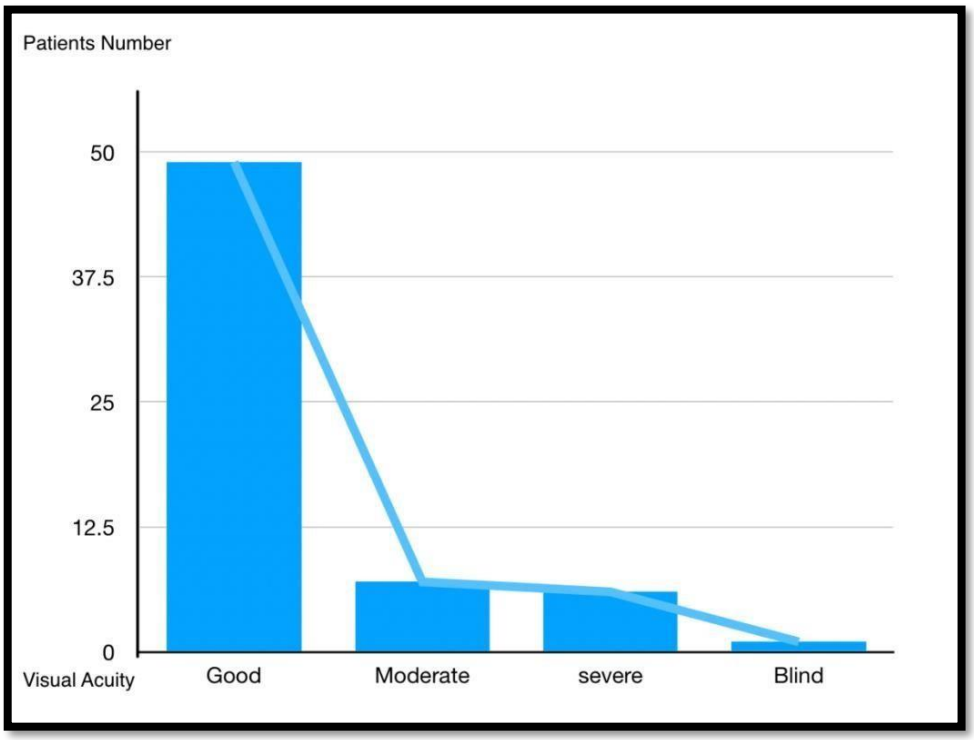

Figure (4) Patients distribution according to Visual Acuity

DISCUSSION:

This study was done to 63 patients who had ocular trauma majority of them were between the age of 21-30-year-old due to their activity pattern.

More than half of them were of male gender due to their type of work which involves more dangerous acts.

In this study Ocular trauma in paediatric patients less than 10 years account for23.8./. which may be due to neglect and uses of harmful toys or games. Blunt trauma was the most common the trauma type also due to pattern of activity in the age group and gender that were the most affected .

In our study corneal foreign body account for 25.3./. which divided into metal foreign bodies 25./. and wood foreign bodies which account for 31.3./. which supported by Klopter J, Tielsch JM, Vitale S, et al. result in developing communities most of injuries occur in farming activities, while industrial activities in developed communities were responsible for the majority of cases.

[9,10] .

A lot of cases was a metal foreign body and all in male; which reflects to their workplaces and don't use the protective measures. Ozkurt ZG, Yuksel H, Saka G, etal support our results [11]

In our study closed globe injury is the more common than open globe injuries while in other study carried at Egypt [12] the most common is open globe injuries ,we suggest this difference because our study carried at general hospital with primary care services and not a speciality centre and the sample taken from the emergency department not the admitted patients.

Most cases of ocular trauma have good visual acuity due to their nature of being mostly of closed type with no severe tissue damage and they do not need hospital admission.

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