**ORIGINAL ARTICLE**

# Frequency of Type of Ocular Trauma in Children

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## ABSTRACT

**Aim**: To determine the frequency of type of ocular trauma in children in our population.
**Methods**: This descriptive case series study was carried out at Department of Ophthalmology, Hayatabad Medical Complex, Peshawar from 1st June 2015 to 31st December 2015. A total of 200 cases of either gender between 1-10 years of age with ocular trauma were included.
**Results**: In our study, majority of the cases were between 6-10 years of age i.e., 119(59.5%) while 81(40.5%) were between 1-5 years with mean age was 7.36±3.46 years. Gender distribution shows 131(65.5%) were male and 69(34.5%) were females. Right was involved pre-dominantly by calculated 97(48.5%) followed by 94(47%) left eye and 9(4.5%) had bilateral eye injuries. Type of ocular trauma was 81(40.5%) had injury due to house hold objects, 43(21.5%) had blunt trauma, 39(19.5%) had sports injuries, 29(14.5%) had road traffic accidents while 8(4%) had chemical injuries.
**Conclusion**: Frequency of ocular trauma due to household objects was more common in children.
**Key words:** Mandibular third molar impaction, Dolicofacial face type, Brachyfacial face type

## INTRODUCTION

Ocular trauma is the commonest causes of acquired unilocular blindness in children[1]. It is estimated in 8-14% of total injuries in children[2]. Thirty-five percent of all children with ocular trauma is recorded in <17 years of age.[3] Usually, male children are more prone to have eye injuries as compared to female because of adventurous and aggressive in nature[4,5].

Majority of the children with ocular trauma presents with injury at (44-46%) than outdoors (26-28%)[6]. Three types of ocular injuries include Open globe, closed globe, and adnexal injuries. The commonest emergencies are due to open-globe injuries which require immediate interventions. A small type of trauma may also lead to permanent visual impairment and creates significant impact on quality of life in future. However, awareness regarding these injuries and its early specialized management may give good visual prognosis.[7]

Epidemiology of ocular trauma in children varies in different regions, with different variables e.g. age, gender, type of injury, cause of injury and place of injury. Very few studies are conducted to record the type of ocular trauma in our local set up, however, this study was conducted to rule out the frequency of type of ocular trauma in children in our population.

## PATIENTS AND METHODS

A total of 200 cases with ocular trauma presenting to Emergency Department of Ophthalmology, Hayatabad Medical Complex, Peshawar between 1-10 years of age of either gender were included in the study during 1st June 2015 to 31st December, 2015. While the cases having history of established eye diseases e.g. glaucoma, congenital anomalies, other non-traumatic were excluded from the study. A detailed history was taken including demographic data (age, sex, address) and clinical presentation.

The collected information was entered in SPSS version 16.0 and analyzed through it. Age was presented as Mean ± S.D. Gender and type of ocular trauma was presented as frequency and percentage.

## RESULTS

In our study, majority of the cases were between 6-10 years of age i.e., 119(59.5%) while 81(40.5%) were between 1-5 years of age with mean age was 7.36±3.46 years. Gender distribution shows 131(65.5%) were male and 60(34.5%) were females. Right was involved pre-dominantly by calculated 48.5% (n=97) followed by 94(47%) left eye and 4.5% (n=9) had bilateral eye injuries. Type of ocular trauma was calculated as 81(40.5%) had injury due to house hold objects, 43(21.5%) had blunt trauma, 39(19.5%) had sports injuries, 29(14.5%) had road traffic accidents while 8(4%) had chemical injuries (Tables 1-4, Fig.1).

Table 1: Frequency of age distribution (n=200)

| Age (years) | n | %age |
|---|---|---|
| 1-5 | 81 | 40.5 |
| 6 – 10 | 119 | 59.5 |
| Mean±SD | 7.36±3.46 | |

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Table 2: Frequency of gender distribution (n=200)

| Gender | n | %age |
|---|---|---|
| Male | 131 | 65.5 |
| Female | 59 | 34.5 |

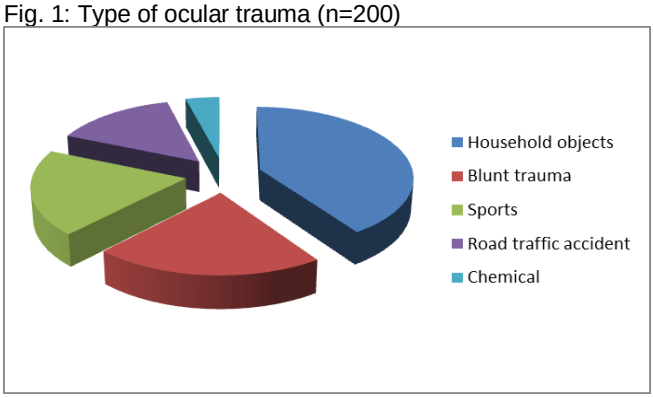
Table 3: Frequency of involvement of eye (n=200)

| Involvement of eye | n | %age |
|---|---|---|
| Right eye | 97 | 48.5 |
| Left eye | 94 | 47.0 |
| Bilateral | 9 | 4.5 |

Table 4: Frequency of place of ocular trauma (n=200)

| Place of trauma | n | %age |
|---|---|---|
| Home | 132 | 66.0 |
| Outdoor | 68 | 34.0 |

Fig. 1: Type of ocular trauma (n=200)




## DISCUSSION

Generally, children are more prone to eye injuries due to their immature motor skills and immature common sense. Though, most of the injuries are preventable by adopting simple protective measures, many children hurt visual impairment affecting their psychosocial development.

In our study, most of the cases are male which is similar to other studies,[8-10] it may be due to more active behavior than girls. School-aged children were more prone to have ocular trauma, as the children are discovering their world and exploring new activities, our findings are in agreement with previous studies.[9-10]

Oum et al[11] revealed that 13.6% of injuries were chemically induced lower than reported in our study i.e. 4%. Another study[12] conducted by Theresa Gladiola B and others evaluated the demographics, incidence, etiology, and severity of pediatric ocular trauma cases in a tertiary care hospital and they recorded that common age of injury was 2-6 years, 72% had injuries met at home followed by blunt trauma (55%). These findings are in agreement with our study.

Noorani et al[13] in a local study revealed that 297(64.3%) were males and 165 (35.7%) were females, their mean age was 7.03±3.61 years, 42.9% were school-going age group i.e., 6-11years. Frequently injuries were recorded at home (215 patients, 46.5%), blunt trauma was occurred in 228 (49.4%) cases, they were of the view that ocular trauma can be minimized by taking preventive measures as adopted in other developed countries as more common injuries occurred at home.

The prevalence of ocular trauma occurred at home reveals that supervision at home is not appropriate. Hence, it is desired that parents and family members should carefully monitor the activities of growing aged children. Additionally, all those house-holds may harm the pediatric eyes should be kept in a safe place and out of reach of children.

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