ORIGINAL ARTICLE

Prevalence of Ocular Emergencies in Quetta - Balochistan

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ABSTRACT

Purpose: To acquaint the ophthalmologist and paramedical technical professionals for better prevention and management about magnitude of ocular emergencies

Material and methods: This study was conducted over a period of 4 years from January 2005 to December 2008 at the Department of ophthalmology Bolan Medical College / Helper's Teaching Eye Hospital Quetta. A comprehensive review of clinical data available in the computer record available for admitted ocular emergencies was carried out.

Results: Total admissions during the study period were 9635. Total admitted ocular emergencies (OE) were 1927 i.e. 20% of total admission. Male to Female ratio was 2 : 1. Non-traumatic OE were 45% while traumatic were 55%. In non-traumatic group male were 75% while female were 27%. Corneal cancers (35%) and Acute Glaucomas (27%) were leading causes of the non-traumatic group while open globe injuries (OGI) were leading the list of traumatic OE. Total surgical procedures performed for acute emergencies were 1156 i.e. 12% of the total major ophthalmic surgeries. Average stay for non-traumatic admitted OE was approximately 6 days whereas for the traumatic OE was 5.5 days.

Conclusion: i) Ocular Emergencies formed the significant proportion of total ophthalmic admission. (ii) Traumatic OE were slightly more than non-traumatic OE. (iii) Male were affected more commonly in both the traumatic or non-traumatic group. (iv) Most of O.E. needed surgical intervention. (v) Average stay for OE was longer than routine admissions.

Key words: (OE) Ocular Emergencies, (OGI) Open Globe Injuries, (IOFB)Intra-ocular Foreign Body.

INTRODUCTION

The ocular emergencies contribute a major share in various ocular diseases. The ophthalmologists are frequently encountered by OE whether traumatic or non-traumatic. They are associated with high risk of complications and most of time difficult to manage.

The blindness has profound human & social as well as economic consequences in all societies. The global magnitude of blindness is estimated at 50 million and is expected to increase to 75 million by the year 2020. Almost 80% of global blindness is avoidable and 90% blind people live in developing countries[1].

Vision 2020 aim is to eliminate avoidable blindness by the year 2020 through various coordinated strategies and aimed at primary causes of blindness[2].

The ocular trauma mostly affects male, young and it have a potential risk of blindness. The trauma mostly occurs in industries, during sports and at homes[3].

The inadequate safety measures at work places, lack of adequate care facilities and delay in presentation are some of the important factors for poor outcome of ocular trauma in developing countries. It has been reported that 5% of blindness in developing countries is trauma related[4]. It has been reported that 5-16% of all admissions in eye department are trauma related[5].

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MATERIAL AND METHODS

This study was carried out at Eye Department, Bolan Medical College / Helper's Teaching Eye Hospital, Quetta from January 2005 to December 2008. All the patients admitted as OE during the study period were included in study. All the relevant data regarding patients were entered in ACCESS based software. This data can be reviewed and analyzed whenever needed. Ocular emergencies were grouped into Traumatic and Non-Traumatic. Age and sex distribution was studied among both the groups. The order of frequency of various OE was assessed. The surgical procedures which were carried out also noted. The Hospital stay among both the groups was compared and evaluated.

RESULTS

Total admissions during the study were 9635 whereas total admitted OE were 1927 i.e. 20% of the total admissions. Male were 1252 (65.12%) while females were 672 (34.81%) out of which the non-traumatic OE were 867 (45%) while the traumatic OE were 1060 (55%). Among the non-traumatic OE, 538 (62%) were males while females were 229 (38%).

There were 773 (73%) male and 287 (27%) female in the traumatic group.

Age and sex distribution are shown in Table-1 and Table-2). Table-3-5 shows frequency of Non-Traumatic and Traumatic OE respectively. Among Non-Traumatic OE, corneal ulcer 304 (35%) and acute glaucoma 234 (27%) were the leading causes. Total surgical procedures performed for OE were 1156 which is 12% of total admitted major ophthalmic surgeries performed during study period. The various surgical procedures performed for OE are shown in Table-5. The repair procedures among the surgical cases were on the top rank i.e. 497 (43%) while Evisceration / Enucleation were performed in 129 (12%) patients. Average hospital stay for OE was 6.5 days. Non-Traumatic OE had an average stay of 6.7 days whereas Traumatic OE had 5.5 days (shown in Table-6 & Table-7).

Table 1: Age and sex distribution of non-traumatic group (n = 867)

Age distribution	Male	Female
0 – 19 years	113 (13%)	43 (5%)
20 – 39 years	104 (12%)	26 (3%)
40-59 years	130 (15%)	95 (11%)
60 and above	191 (22%)	165 (19%)
Total	538 (62%)	329 (38%)

Table 2: Age and sex distribution of traumatic group (n = 1060)

Age distribution	Male	Female
0 – 19 years	445 (42%)	180 (17%)
20 – 39 years	201 (19%)	53 (5%)
40-59 years	84 (8%)	32 (3%)
60 and above	43 (4%)	22 (2%)
Total	773 (73%)	287(27%)

Table-3: Non-traumatic OE (n = 867)

Disease	No. of patients
Corneal Ulcers	304 (35%)
Acute Glaucomas	234 (27%)
Endophthalmitis	104 (12%)
Uveitis	43 (5%)
Orbit / adnexa	78 (9%)
Viteroretinal	69 (8%)
Neurophthalmology	26 (3%)
Miscellaneous	9 (1%)

Table-4: Traumatic OE (n = 1060)

Disease	No. of patients
Corneal Ulcers	304 (35%)
Acute Glaucomas	234 (27%)
Endophthalmitis	104 (12%)
Uveitis	43 (5%)
Orbit / adnexa	78 (9%)
Viteroretinal	69 (8%)
Neurophthalmology	26 (3%)
Miscellaneous	9 (1%)

Table-5: Surgical procedures for ocular emergencies (n = 1156)

Disease	No. of patient
Repair±10 FB Round	497 (43%)
Conjuctival Flap	93 (8%)
Cataract Extraction ± 10L	104 (9%)
Evisceration / Enucleation	139 (12%)
Trabeculectomy	81 (7%)
A/C Wash	57 (5%)
Surgical PI	23 (2%)
Others	162 (14%)

Table 6: Hospital stay in days (non-traumatic group)

Disease	No. of days
Corneal Ulcers	10.0
Acute Glaucomas	6.0
Endophthalmitis	12.0
Uveitis	7.0
Orbit / adnexa	5.0
Viteroretinal	6.0
Neurophthalmology	4.0

Table 7: Hospital stay in days (traumatic group)

Disease	No. of days
Open Globe Injuries	6.0
10 FB	5.0
Traumatic Hyphaema	5.0
Chemical / Thermal Injuries	8.0
Miscellaneous	4.0

DISCUSSION

The health professionals especially the Ophthalmologists and technical staff as well as institutions are facing enormous load of various ocular diseases, among them Ocular Emergencies had a great share.

In our study more than ¼th of the patients admitted as ocular emergencies. The traumatic and non-traumatic OE had almost equal share but in our study the Traumatic OE are slightly higher ratio than non-traumatic OE. The male preponderance was seen in both Traumatic and Non-Traumatic OE.

The corneal ulcers were among the top rank in Non-Traumatic O.E. In USA there are 11 corneal ulcers per 100,000 population annually[6]. In India, this number is much high i.e. 113 per 100,000 population per year[7]. Conservative estimates are that the corneal ulcer blinds at least 1000 million eyes every year in world[8].

In our study bacterial corneal ulcers were most frequent followed by fungal. The viral corneal ulcers were less while nutritional was very least.

In our study we found that acute glaucomas was 2nd leading cause (29%) among Non-Traumatic group. Wajid & Khan in their study have reported that 5% of their cases with irreversible blindness were due to primary angle closure glaucomas[9]. 12%

of cases in our study were in the list, was having Endophthalmitis. About more than half the total admitted ocular emergencies were trauma related. Ocular trauma has a great potential to cause permanent visual or cosmetic defect and is a major cause of uniocular blindness and visual impairment. Very little about its epidemiology is still known.

Khattak et al has also reported trauma as a common cause of unilateral blindness[10].

In Traumatic group 42% of patients were less than 20 years of age with male preponderance and almost double than female patients. This preponderance of young male patients in Traumatic group has been reported by many authors and National & International studies. In another study it was found that male to female is usually greater than 4:1 for acquired trauma related blindness in children[11].

Al-Rajhi et al observed that 77% of ocular trauma occurred in males[12]. Children are particularly vulnerable because of lack of awareness and inability to protect themselves13. Among the Traumatic cases OGI with or without 10FB were 72% while the traumatic hyphaema was the 2nd commonest cause with 19% cases.

According to Fish et al, 22.2% of patients presented with hyphaema in their study14. Islam et al have reported stone as the commonest source of blunt trauma15. However, Jan et al in their study have reported cricket ball as the most common cause of blunt trauma and reported hyphaema as cause of legal blindness in their study[16].

Chemical injuries, relatively less frequent are still very devasting. In our study 4% patients presented with chemical or thermal injuries, compared to 5.6% as reported by Fish et al. The management regarding ocular burns is still challenging for ophthalmologists. Even under favorable circumstances, visual performance is compromised due to various factors like ocular scarring and vascularisation[17]. 12% of patients were admitted for endophthalmitis management, which include both post operative Endophthalmitis, and traumatic endophthalmitis. It has been reported that endophthalmitis associated with trauma has a poorer progress than with cataract extraction[18]. Post traumatic endophthalmitis is a catastrophic complication of penetrating ocular trauma[19]. The risk factors for developing of endophthalmitis in the setting of trauma are the presence of 10FB, delay in primary repair, disruption of the crystalline lens and rural setting[20].

Briston et al reported an increased incidence of endophthalmitis in eyes with 10FB (10.7%) compared to eyes without 10FB (5.2%)[21].

Evisceration / Enucleation were performed for 12% of OE. The relative frequencies of the indications for the procedures are almost similar as that reported by Babar et al. Endophthalmitis needed prolonged hospitalization[22]. Average hospital stay for OE was about double of the routine cases.

CONCLUSION

- The OE contributes heavy work load on Health Professional.
- The younger men were at most risk.
- The OE had a permanent visual, cosmetic and psychological impact and it should not be under estimated.
- The primary presentation is solution to all the secondary and tertiary problems.

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