

**EMERGENCY CASES IN OPHTHALMOLOGY AT KING HUSSEIN MEDICAL
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ABSTRACT

Aim: to explore type and patterns of ophthalmic cases attending to the emergency room at King Hussein Medical Center. **Method:** retrospective study was conducted at the emergency department of King Hussein Medical Center between Jan. 2020 and Jan 2022. All patients who attended to the emergency department seeking for medical advice regarding ocular complaints were enrolled in the study. Data was initially collected regarding demographic features of the patients, previous medical and ocular history and main complaint of the patients. The outcome of detailed ocular examination was recorded which included best corrected visual acuity (BCVA), anterior segment examination, posterior segment examination and intraocular pressure measurement. **Results:** 1512 patients with a mean age of (35.5±12.2) years were enrolled in the study. 892 (59.0%) of them were males. 38.5% of patients were at 45 years of age or above. Pain was seen in 44.1% of cases and ocular trauma was the most common diagnosis established at the emergency room (37.6%). **Conclusion:** Eye pain was the most frequent symptom encountered among ocular emergencies. Trauma was the most ocular professional diagnosis established at the emergency room. Vast majority of ocular cases were urgent.

KEYWORDS: Emergency room, Ocular complaints, Ocular emergencies.**INTRODUCTION**

Ocular emergencies are supposed to be the cases in which the sight is suddenly threatened when the medical care is delayed or not presented to the patients.^[1,2] The ophthalmic department at King Hussein Medical Center presents the medical care to the patients attending to the emergency room at any time over 24 hours.

Globally, ocular trauma was a frequent cause for seeking medical care at the emergency room.^[3,4,5] Although the eye represents only about 3% of the total body surface area, it is the most common organ vulnerable to trauma after hands and feet.^[6,7] Eye trauma is the most common cause of unilateral visual impairment or blindness.^[8,9,10]

Infections, glaucoma, uveitis, retinal detachment, diabetic retinopathy and retinal vascular occlusions are frequently seen at the emergency room.^[11,12] Therefore, early assessment and proper treatment is very crucial to prevent visual morbidity and to improve visual outcome.

The aim of this study is to determine the reasons for seeking medical advice at the emergency room and the patterns of ocular conditions seen.

METHOD

This retrospective study was conducted at the emergency department of King Hussein Medical Center between Jan. 2020 and Jan 2022. All patients who attended to the emergency department seeking for medical advice regarding ocular complaints were enrolled in the study. Data was initially collected regarding demographic features of the patients, previous medical and ocular history and main complaint of the patients. The outcome of detailed ocular examination was recorded which included best corrected visual acuity (BCVA), anterior segment examination, posterior segment examination and intraocular pressure measurement. The type of medical care presented to the patients was reported as well. Ethical committee approval was granted before the start of the study and simple statistical analyses such as mean, average, and percentage were used in the study.

RESULTS

1512 patients with a mean age of (35.5±12.2) years were enrolled in the study. 892 (59.0%) of them were males. The demographic features of the patients are summarized in table 1.

Ninety-two patients (6.1%) were admitted to hospital, 968 patients (64.0%) were treated and discharged and the remaining were referred for further management. Surgical intervention was performed to 28 patients (1.9%).

DISCUSSION

Although it is difficult to make the patients distinguish between real ocular emergencies and non-urgent conditions. This resulted in high frequency of non-urgent cases encountered among patients attending to the emergency room.^[13,14] However, it is better to consider each case as emergency case until proven otherwise to encourage patients for early seek of medical care which will be positively reflected on visual outcome. In this study, 28.8% of cases were not-emergences. This reflects the awareness of patients and their families regarding the nature of ocular disorder. Those results were not comparable to that in regional countries where the majority of ocular cases attending to the ER were not urgent and could be managed in the out-patient clinic.^[15,16] There was no significant difference of gender distribution among all age groups with male to female ration around (3:2). The most common age group affected were patients at 45 years of age or above followed by patients between.^[15-30] years. That is probably because of the higher prevalence of associated

medical diseases and lack of experience and supervision making them more exposed to ocular disorders like trauma in the two groups respectively.

Ocular pain was the most frequent symptom encountered among the patients. Pain was found in 68.3% of ocular trauma, 66.0% of keratitis, 84.6% of glaucoma, 92.1% of patients, 52% of patients with uveitis, 78.7% of patients with ocular foreign body and all patients of endophthalmitis and orbital cellulitis. Eye pain was more frequent in patients <30 years of age than others. In this age group trauma was the most frequent professional diagnosis where it may result in corneal abrasion, ocular foreign body and open globe injury. While visual impairment was more encountered among patients at 45 years of age or older with higher prevalence of diabetes, hypertension and their complications. Sever visual impairment was significantly associated with endophthalmitis and vitreous hemorrhage while normal vision was associated with dacryocystitis and extra ocular foreign body.

Although the duration of the study was relatively short which was a limitation of the study, the obtained results were quite different from other studies performed in regional countries.

Table 1: The demographic features of the patients.

Age (years)	Number	Percentages	Males (percentage)
< 15	304	20.1%	182 (59.9%)
15 - <30	390	25.8%	240 (61.5%)
30 - <45	240	15.9%	148 (61.7%)
≥45	578	38.2%	322 (55.7%)
Total	1512	100%	892 (59.0%)

Table 2: Main complaints of the patients.

Complaint	Number of patients	Percentages
Eye pain	668	44.1%
redness	378	25.0%
Visual impairment	230	15.2%
itching	152	10.1%
Foreign body sensation	92	6.1%
discharge	84	5.6%
Floaters	44	2.9%

Table 3: Types of ocular diseases.

Diagnosis	Number of patients	Percentage	Mean BCVA
Trauma	568	37.6%	0.52
conjunctivitis	387	25.6%	0.73
Dacryocystitis	42	2.8%	1.0
Orbital cellulitis	20	1.3%	0.60
keratitis	48	3.8%	0.26
Uveitis	34	2.2%	0.82
glaucoma	98	6.5%	0.21
Foreign body	66	4.4%	0.91
Vitreous hemorrhage	54	3.6%	0.10
Retinal detachment	22	1.5%	0.28
Retinal vascular occlusions	49	3.2%	0.15

Endophthalmitis	5	0.3%	0.05
others	119	7.9%	0.36

Table 3: Past medical, Ocular and Surgical history.

Disorder	Number of patients	Percentage
Diabetic retinopathy	62	4.1%
hypertension	48	3.2%
Cataract surgery	32	2.1%
glaucoma	26	1.7%
uveitis	22	1.5%
Intra vitreal injection	28	1.9%
Pars plana vitrectomy	10	0.6%

CONCLUSION

Eye pain was the most frequent symptom encountered among ocular emergencies which was more prevalent among patients below thirty years of age. Trauma was the most ocular professional diagnosis established at the emergency room and causing pain. Vast majority of ocular cases were urgent. The most common age group attending to the emergency room were patients above 45 years of age.

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