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Pattern of Ocular Emergencies During the Festive Period in Port Harcourt, Nigeria

Damiete Elaine Briggs

Abstract: ***Objective**: To evaluate the pattern of ocular emergencies during the festive period in Port Harcourt, Nigeria. **Materials and methods**: The study was a retrospective hospital-based study carried out at the Ophthalmology Department of Rivers State University Teaching Hospital. Records of patients presenting with ocular emergencies during the Christmas 2025 and New year 2026 festive period were reviewed. Data was collected of all ocular emergencies within 1 month of the festive period. **Results**: 40 patients with ocular emergencies were identified. Males constituted 75.0% of the cases, with a male: female ratio of 3:1. The Mean age was 29.9 ± 18.3 years. Closed globe injuries accounted for 80% of cases while blunt trauma was the leading cause of injury (55.0%). Fireworks-related injuries accounted for 17.5% of presentations. **Conclusion**: Ocular emergencies were more common among young males during the festive period. Closed globe injuries predominated, and blunt trauma was the most frequent cause of injury. Preventive public awareness and safety measures during festive activities may reduce the burden of ocular emergencies.*

Keywords: Ocular emergencies, Festive period, Blunt trauma, Fireworks injuries, Nigeria

1. Introduction

The festive period in Nigeria is characterised by celebrations, increased outdoor activities and gatherings. This festive period is celebrated towards the end of year during the christmas and new year season. Schools are usually on holidays and children tend to have more time and room for play. These predispose to more injuries and emergencies including eye emergencies. Ocular emergencies refer to conditions that involve threats to the visual system which if left untreated can lead to permanent visual loss and/or severe threats to the visual function of patients.(1)

During the festive period, there is an increase in ocular emergencies due to increased use of fireworks, toys, celebratory devices and other recreational activities.(2) Firework related injuries have been documented by several reports. (3,4) A study done in Nepal noted that fire cracker injuries are known to cause mild to severe ocular damage, sometimes even sight- threathening.(3) Another study in South Africa among children found that fireworks accounted for 95% of all ocular emergencies during the festive period.(5) In south-west Nigeria, Adeoti et al noted that banger-related injuries lead to significant ocular morbidity.

Ocular trauma is a significant cause of visual impairment and a leading cause of preventable monocular blindness(6–8). They have significant socioeconomic impact and are considered as an important preventable public health programme globally(9). These injuries commonly affect young people leading to substantial loss of productivity and high health care costs for treatment and long- term care. In developing countries, ocular injuries are more common and more severe due to inadequate safety measures, delayed presentation ,lack of optimum treatment facilities, use of traditional eye medications and poor education.(10)
Ocular emergencies range from mild non-sight threatening injuries to very severe injuries which may be potentially blinding.(11)

This study aims to look at the pattern of ocular emergencies seen at the Ophthalmology department during the festive period (Christmas 2025 to New year 2026 holidays).

2. Materials and Methods

This is a retrospective hospital-based study of ocular emergencies which presented to Ophthalmology department of Rivers State University Teaching Hospital, Port Harcourt, Rivers state during the festive season of Christmas 2025 to New year holiday 2026. Ethical approval was obtained from the ethics committee of Rivers state university teaching hospital, Port Harcourt. Data of patients during or within one month of the festive season (2weeks prior and after) were collected. Convenience sampling method was used. Injuries were classified according to the Birmingham Eye Trauma Terminology system (BETTS).

3. Results

During the study period, 40 cases of ocular emergencies were seen in the Ophthalmology department at Rivers state University Teaching Hospital. 75% male and 25% female with a male to female ratio of 1:3. The ages of patients ranged from 1 year to 65 years with a mean age of 29.9± 18.3 years. The age group with the highest frequency was 30-39 years. The most common cause of injury was blunt trauma (55%). Fireworks accounted for 17.5% of the emergencies as shown in Figure 1.

Majority of the emergencies had closed globe injuries accounting for 80% of the cases. At presentation, 35% of study participants had no visual impairment while 20% had profound visual impairment. 70% of them had normal intraocular pressure of between 10 to 21mmHg. 65% of patients did not require surgical intervention for the treatment of their injuries.

The most common type of injuries were corneal laceration, subconjunctival hemorrhage and lid laceration as shown on Table 2.

Table 1: Sociodemographic characteristics of study participants

Variables	Frequency (N=40)	Percent
Gender		
Male	30	75.0
Female	10	25.0
Age group (Years)		
<10	6	15.0
10-19	7	17.5
20-29	7	17.5
30-39	8	20.0
40-49	6	15.0
≥50	6	15.0
Mean ± SD, range	29.9±18.3, 1-65	

SD-Standard deviation

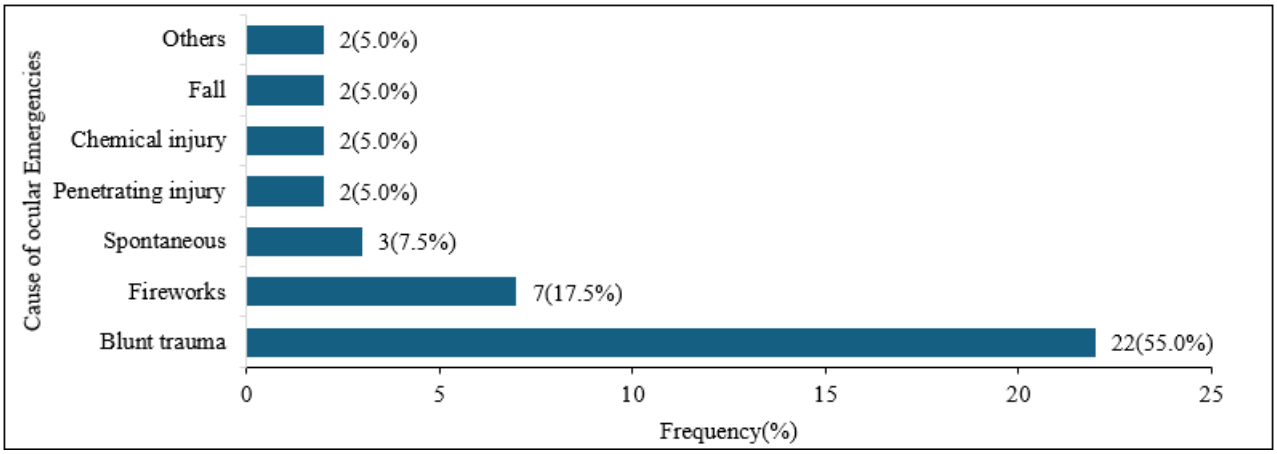

Figure 1: The distribution of the Cause of ocular emergencies of study participants

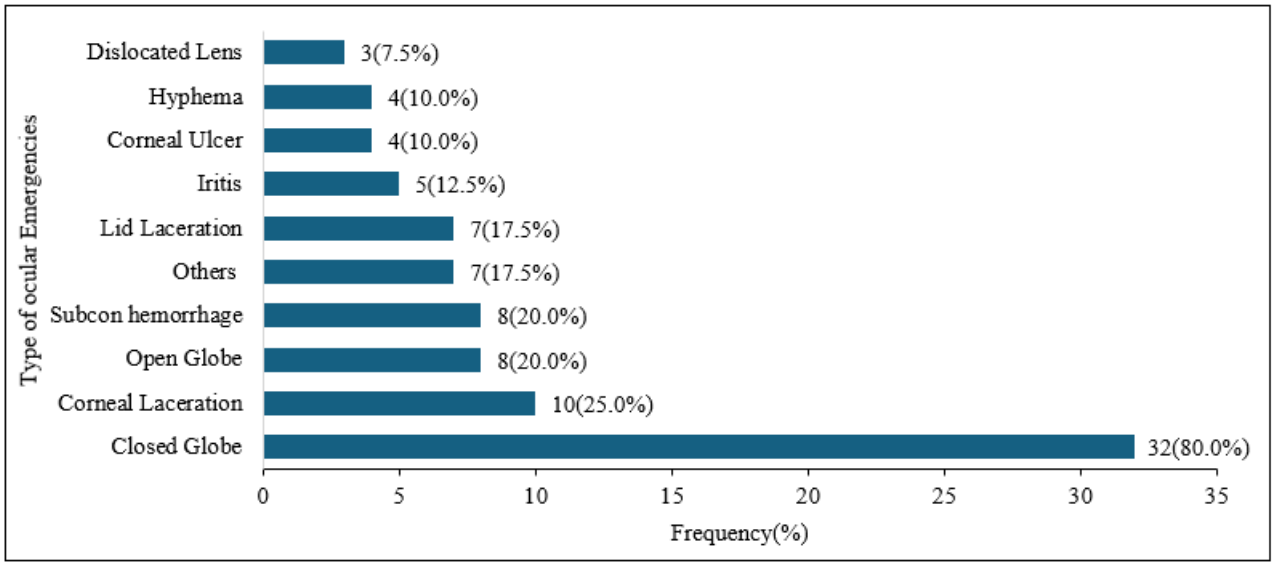

Figure 2: The distribution of the type of ocular emergencies of study participants

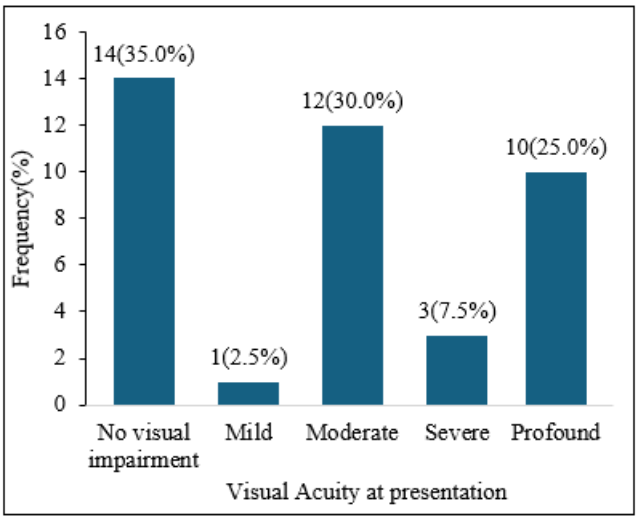

Figure 3: The distribution of Visual Acuity at presentation of study participants

Classification of visual impairment
No Visual Impairment= 6/9 - 6/5
Mild Visual impairment = 6/12
Moderate Visual impairment= 6/18 - 6/36
Severe Visual impairment= 6/60 - 3/60
Profound Visual impairment – Light Perception – No light perception

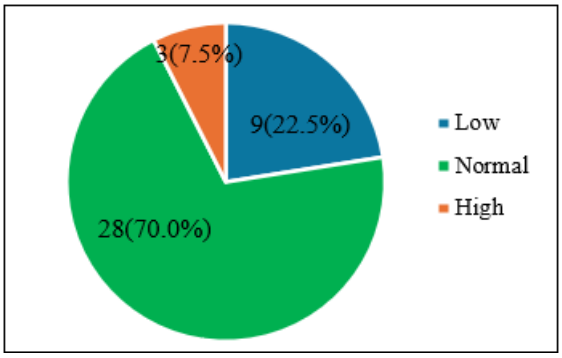

Figure 4: The distribution of IOP of study participants

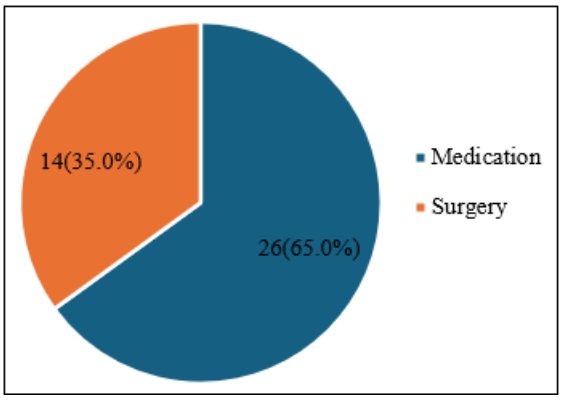

Figure 4: The distribution of the type of treatment

Table 2: Distribution of the type of ocular emergencies according to Gender

Type of ocular emergencies	Gender		Total
	Male	Female	
Closed Globe	23(71.9%)	9(28.1%)	32(100.0%)
Corneal Laceration	8(80.0%)	2(20.0%)	10(100.0%)
Open Globe	7(87.5%)	1(12.5%)	8(100.0%)
Subconjunctival hemorrhage	5(62.5%)	3(27.5%)	8(100.0%)
Lid Laceration	7(100.0%)	0(0.0%)	7(100.0%)
Iritis	3(60.0%)	2(40.0%)	5(100.0%)
Corneal Ulcer	3(75.0%)	1(25.0%)	4(100.0%)
Hyphema	2(50.0%)	2(50.0%)	4(100.0%)
Dislocated Lens	3(100.0%)	0(0.0%)	3(100.0%)
Others	6(85.7%)	1(14.3%)	7(100.0%)

4. Discussion

This study looks at the pattern of ocular emergencies during the festive period in Port harcourt Nigeria. This study found that most of the ocular emergencies were in male (75%) compared to females. This is in agreement with similar studies which found a greater male preponderance.(1, 8, 12, 13) This is likely due to a greater risk taking behavior in males.(14) The age group with the highest incidence of ocular emergencies were 30-39 year olds. This is similar to what was discovered in study done in Iran(15). Previous studies in Nigeria also found adults of working age to be most affected.(16,17) This age group are more likely affected due to greater chance of exposure to various agents of injury while at work. However , another study done in South India found a much lower mean age(13)

Majority of the injuries in this study were due to blunt ocular trauma. This is in contrast to a study done in Saudi Arabia were ocular trauma accounted for 19.1% of the cases.(1) fireworks accounted for 17.5%. this is the second most common cause of ocular emergency in this study. this is much lower compared to what was observed in a similar study done in Nepal(2). Closed globe injuries were more common than open globe injuries in this study. This is similar to what was reported by Megbelayin et al and Omolase et al.(17,18) However , a study done in South eastern Nigeria found open globe injuries to be more common.(19) This difference may be because the study was done among hospitalized patients and open globe injuries are likely to be admitted than closed globe injuries.

The most common types of injuries observed in this study were corneal laceration, sub conjunctival hemorrhage and lid laceration. This is similar to what was noted in a study in South eastern Nigeria(11) 7.5% of the participants presented with severe visual impairment. This is much lower than what seen in a study done in Netherlands which found 18.3 % of its participants with severe visual impairment(20)

5. Limitations of the Study

The study is a retrospective study and as such the data used for the study were gotten from medical records which may not have been accurately documented.

This study focuses on ocular emergencies during the festive period and may not reflect the pattern of injuries at other times during the year.

6. Conclusion

Ocular emergencies during the festive period in Port Harcourt, Nigeria predominantly affected young males. Closed Globe Injuries were the most common presentation while blunt trauma was the leading cause of injury. Although fireworks contributed to a smaller proportion of cases, they remain an important preventable cause of ocular morbidity. Strengthening public education and promoting safety measures during festive activities may help reduce the occurrence of ocular emergencies.

Ocular emergencies are ubiquitous in nature and could occur from a myriad of causes. However, Blunt trauma was the most common cause of ocular emergencies during the festive period.

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