Original Article

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Impact of COVID-19 Lockdown on Profile of Ocular Injuries: A Retrospective Cohort Study from a Tertiary Care Centre, West Bengal, India

Ophthalmology Section

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ABSTRACT

Introduction: Ocular trauma represents a significant yet preventable contributor to visual impairment. The enforcement of lockdown measures during the Coronavirus Disease-2019 (COVID-19) pandemic led to people remaining confined to their homes, which likely influenced both the risk factors and the pattern of ocular injuries during this period.

Aim: To determine the characteristics and visual outcomes of patients with ocular trauma during the COVID-19 and post-COVID-19 periods.

Materials and Methods: This retrospective, hospital-based cohort study was conducted among patients presenting to the Department of Ophthalmology, Midnapore Medical College and Hospital, Midnapore, West Bengal, India. Data were collected on patient demographics, mode and location of injury, time interval between injury and presentation, presenting Visual Acuity (VA) and the management of ocular trauma. Categorical variables were summarised using frequencies and percentages, while continuous variables were expressed as mean±standard deviation deviation. Group differences were analysed using Pearson's Chi-square test.

Results: A total of 2,010 eyes of 1,940 patients were included in this study. Males were more predominant in both the COVID-19 and the post-COVID-19 lockdown periods. The mean age of the study population was significantly lower during COVID-19 (25.48±20.3 years) compared to the post-COVID-19 period (29.97±17.3 years) (p-value=0.006). Injuries sustained at home were considerably higher than workplace injuries during the COVID-19 pandemic. Patients with ocular trauma during COVID-19 had delayed presentation. The incidence of closed globe injuries was notably higher during the COVID-19 period, with corneal epithelial defects being the most prevalent type, observed in 25.7% of cases (p-value=0.002). Sharp objects were the leading cause of injury during this time, accounting for 21.4% of cases. In contrast, during the post-COVID-19 period, the most common causative agents were plant leaves (20.3%), followed by animal-related injuries (15.3%). Furthermore, the proportion of patients presenting with trauma-related blindness was greater during the COVID-19 period (10.1%) compared to the post-lockdown phase (9%).

Conclusion: During the COVID-19 pandemic, the number of patients seeking care for ocular trauma significantly decreased, while injuries occurring within the home environment increased. Enhancing public awareness and implementing preventive strategies could help reduce the risk of eye-related complications and vision loss associated with domestic activities.

Keywords: Ocular trauma, Open globe injury, Pandemic, Sharp particles

INTRODUCTION

The novel coronavirus first appeared in Wuhan city, Hubei, China, and soon became a pandemic [1]. To mitigate the spread of COVID-19, the Government of India enforced an early and stringent nationwide lockdown commencing on March 25, 2020. The initial four phases of the complete lockdown spanned from March 25 to May 31, 2020, coinciding with the first wave of the pandemic. Subsequently, during the second wave, marked by a surge in cases, another lockdown was imposed from April 5 to June 15, 2021, with intermittent phases of relaxation [2-4].

Ocular trauma is a significant yet preventable cause of visual impairment in both developed and developing nations. Common places of injury include playgrounds, schools, roads and workplaces [5-8]. Workplace-related incidents and Road Traffic Accidents (RTAs) continue to be major contributors to ocular injuries [9-11]. During the pandemic, access to these areas was either completely restricted or significantly limited, which may have contributed to a reduced incidence of ocular trauma in such settings [12]. The implementation of the lockdown, along with concerns about COVID-19 transmission, limited transportation and adherence to social distancing measures, kept people confined to their homes. This likely had a considerable effect on both the risk and pattern of ocular trauma during this period. However, the incidence of ocular injuries occurring within the home environment was probably higher. Additionally, many routine outpatient departments in hospitals and clinics across India were initially closed during the lockdown [13]. As a result, access to healthcare services was significantly limited for patients. Therefore, this study aimed to evaluate the changes in the pattern of ocular injuries during the COVID-19 pandemic at a tertiary eye care centre in Eastern India. Furthermore, it sought to compare the clinical profile and visual outcomes of patients with ocular trauma between the COVID-19 lockdown period and the post-lockdown phase.

MATERIALS AND METHODS

A retrospective hospital-based cohort study was conducted on patients attending the Ophthalmology Department of Midnapore Medical College and Hospital, Midnapore, West Bengal, India between April 1, 2020 and June 30, 2022. The study was carried out during July-August 2022, in accordance with the guidelines set forth by the Declaration of Helsinki. Written informed consent was obtained from all patients presenting to our institute for participation in the study, which also included consent for data privacy protection.

Inclusion criteria: Participants who sustained ocular trauma and received outpatient treatment, were admitted under the ophthalmology

department, or were admitted to other specialties but required ophthalmological care were included in the study.

Exclusion criteria: Patients with a history of trauma who came for follow-up visits, those with old ocular trauma, incomplete data and patients who did not attend follow-up were excluded from the study. Thirty-five patients were excluded from this study.

A total of 1,940 patients and 2,010 eyes were included in this study. Six hundred and twenty patients attended the hospital during the COVID-19 lockdown period (1st April 2020-30th June 2021), while 1,320 patients attended during the post-COVID-19 lockdown period (1st July 2021-30th June 2022).

All patients underwent a comprehensive eye evaluation upon presentation. Data collected included patient demographics, mode and location of injury, time interval between injury and presentation, VA at presentation and the management of ocular trauma. VA was classified according to the International Classification of Diseases (ICD) 11 [14]. Ocular injuries were categorised into open globe injuries and closed globe injuries [15]. In cases of bilateral involvement, both eyes were included in the analysis. A COVID-19 RT-PCR test was performed on patients requiring surgery under general anaesthesia.

STATISTICAL ANALYSIS

Data were collected and organised in a spreadsheet using Microsoft Excel. Data management and coding were performed within Excel. Statistical analysis was conducted using Statistical Package for the Social Sciences (SPSS) version 16.0 (IBM Inc., Chicago, IL, USA). Descriptive statistics were initially employed, with categorical variables presented as frequencies and percentages, and continuous variables expressed as mean±standard deviation. A Pearson's Chi-square test was used to assess differences between groups. A p-value of <0.05 was considered statistically significant.

RESULTS

A total of 2,010 eyes of 1,940 patients (COVID-19: 620 and post-COVID-19: 1,320) were included in this study. These patients presented with a history of ocular trauma to the emergency department of our institute.

The mean age of the study population was significantly lower during the COVID-19 period (25.48±20.3 years) compared to the post-COVID-19 period (29.97±17.3 years) (p-value=0.006) [Table/Fig-1]. During the COVID-19 lockdown period, a higher proportion of patients were below 12 years of age (45.3%) compared to the post-COVID-19 period (37.1%). Males were more predominant in both the COVID-19 lockdown period (69.6%) and the post-COVID-19 period (75.1%). The area of residence was comparable between the two groups.

Parameters		COVID-19 (n=620)	Post-COVID-19 (n=1320)	p-value
Mean age (years)		25.48±20.3	29.97±17.3	0.006
Age-groups (years)	<12	281 (45.3%)	491 (37.2%)	0.33
	12-50	294 (47.4%)	676 (51.2%)	0.17
	>50	45 (7.3%)	153 (11.6%)	0.016
Gender	Male	432 (69.7%)	992 (75.2%)	0.71
	Female	188 (30.3%)	328 (24.8%)	
Residence	Urban	207 (33.4%)	390 (29.5%)	0.65
	Rural	413 (66.6%)	930 (70.5%)	
Laterality	Right eye	318	501	0.23
	Left eye	279	772	
	Bilateral	23	47	
Time interval between injury and presentation (days)		11.4±16.4	7.7±17.9	0.21

[Table/Fig-1]: Demographic profile of the study population.

[Table/Fig-1,2] shows that the time interval between sustaining an injury and presenting to our institute was higher in the COVID-19 period (11.4±16.4 days) compared to the post-COVID-19 period (7.7±17.9 days). However, this difference was statistically not significant (p-value=0.21).

Duration (days)	<1	2-4	5-7	>7
COVID-19 (n=620)	195 (31.4%)	293 (47.3%)	96 (15.5%)	36 (5.8%)
Post-COVID-19 (n=1320)	618 (46.8%)	382 (28.9%)	251 (19.1%)	69 (5.2%)

[Table/Fig-2]: Time interval between injury and presentation (days) to hospital.

[Table/Fig-3] shows that during the COVID-19 period, 351 (56.6%) patients sustained ocular trauma at home, compared to 362 (27.5%) patients in the post-COVID-19 period (p-value <0.001). Conversely, during the COVID-19 period, 184 (29.7%) patients suffered ocular trauma at the workplace, compared to 549 (41.6%) patients in the post-COVID-19 period (p-value <0.0001). Only 85 patients had ocular trauma due to RTAs during the COVID-19 period, compared to 409 patients in the post-COVID-19 period (p-value=0.31).

Place of injury	COVID-19 (n=620)	Post-COVID-19 (n=1320)
Home-based	351 (56.6%)	362 (27.5%)
Work place	184 (29.7%)	549 (41.6%)
Road Traffic Accident (RTA)	85 (13.7%)	409 (30.9%)

[Table/Fig-3]: Place of ocular trauma.

[Table/Fig-4] shows that blunt trauma was the most common mode of injury during the COVID-19 period (34.2%), whereas foreign body injuries were most common in the post-COVID-19 period (32.5%).

Mode of ocular trauma	COVID-19 (n=620)	Post-COVID-19 (n=1320)
Blunt trauma	212 (34.2%)	397 (30%)
Sharp trauma	133 (21.4%)	197 (14.9%)
Foreign body	167 (26.9%)	430 (32.5%)
Chemical injury	74 (12%)	174 (13.2%)
Thermal injury	12 (2%)	55 (4.2%)
Blast injury	22 (3.5%)	67 (5.1%)

[Table/Fig-4]: Mode of ocular trauma.

During the COVID-19 period, 460 (74%) patients sustained closed globe injuries, 85 (14%) sustained open globe injuries, 70 (11%) sustained eyelid injuries. In contrast, during the post-COVID-19 period, 863 (65%) patients had closed globe injuries, 299 (23%) sustained eyelid injuries, 143 (11%) had open globe injuries [Table/Fig-5]. The incidence of closed globe injuries was higher during the COVID-19 period, with corneal epithelial defects being the most common (25.7%), compared to the post-COVID-19 period (p-value=0.002). Conversely, eyelid injuries were more common in the post-COVID-19 period (p-value=0.001).

Pattern of ocular injury	COVID-19 (n=620)	Post COVID-19 (n=1320)
Closed globe injury	460 (74%)	863 (65%)
Open globe injury	85 (4%)	143 (11%)
Eyelid injury	70 (11%)	299 (23%)
Orbital wall fracture	5 (1%)	15 (1%)

[Table/Fig-5]: Pattern of ocular injury.

Sharp particles (21.4%) were the most common cause of injury during the COVID-19 period, while plant leaves (20.3%) followed by animal-related injuries (15.3%) were more prevalent in the post-COVID-19 period [Table/Fig-6]. The proportion of patients presenting with blindness due to trauma at the time of presentation was higher during the COVID-19 lockdown period (10.1%) compared to the post-COVID-19 period (9%) [Table/Fig-7]. Among these patients, 73.4% regained vision (≥6/12), and 7.6% became blind (<3/60)

during the lockdown period, whereas 85.6% regained vision (≥6/12) and 5.6% became blind (<3/60) during the post-COVID-19 lockdown period.

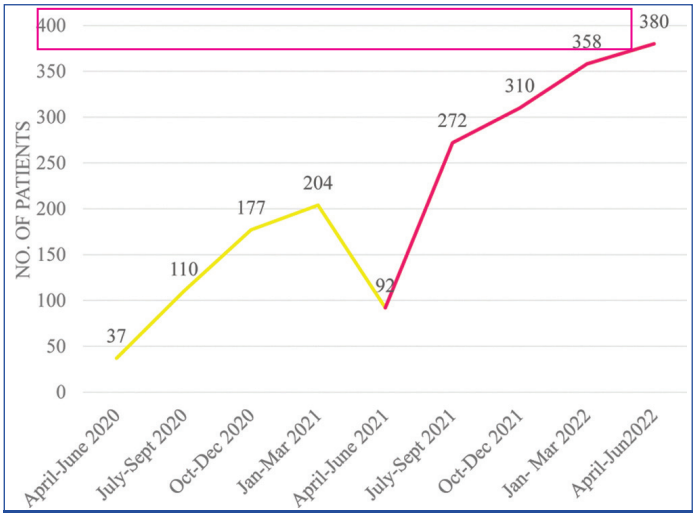
Trauma inflicting agent	COVID-19 (n=620)	Post-COVID-19 (n=1320)
Metallic (Iron)	43 (6.9%)	161 (12.1%)
Plant leaf	124 (20%)	269 (20.3%)
Wooden stick	26 (4.1%)	39 (2.9%)
Construction site related (brick, stone, soil)	14 (2.2%)	47 (3.5%)
Chemical injuries (lime, cement, colour, calotropis flower)	74 (11.9%)	174 (13.1%)
Sharps and daily use (pen, pencil, glass, scissors, knife, plastic)	133 (21.4%)	197 (14.9%)
Sports injury (tennis ball, cricket ball, shuttle cock)	12 (1.9%)	71 (5.3%)
Human inflicted (hand, finger nail, fist, self-fall)	64 (10.3%)	38 (2.8%)
Animal related (cow horn, cow tail, egret bird, caterpillar hair)	96 (15.5%)	202 (15.3%)
Blast injuries (battery blast, cracker, cooker blast)	22 (3.5%)	67 (5%)
Thermal injuries (firecrackers, cooking, incense stick)	12 (1.9%)	55 (4.1%)

[Table/Fig-6]: Various trauma inflicting agents.

COVID-19 (n=620)	Best Corrected Visual Acuity (BCVA)	Post-COVID-19 (n=1320)
270 (43.6%)	>=6/12	775 (58.7%)
90 (14.6%)	<6/12-6/18	167 (12.6%)
115 (18.6%)	<6/18-6/60	133 (10%)
81 (13.1%)	<6/60-3/60	126 (9.5%)
64 (10.1%)	<3/60	119 (9%)

[Table/Fig-7]: Visual Acuity (VA) at presentation of traumatic eye classified according to the International Classification of Diseases (ICD) 11. Values are presented as number (%).

Following the announcement of the lockdown, no patients presented to the emergency department during the initial one-week period. However, there was a gradual increase in the number of patients presenting on a monthly basis, with 32.9% (n=204) of patients presenting during the months of January, February, and March 2021 [Table/Fig-8]. This was followed by a decline in patient presentations, with 14.8% (n=92) presenting from April to June 2021 during the second COVID-19 lockdown. Subsequently, there was another gradual increase in patient presentations, peaking at approximately 380 patients from April to June 2022.



[Table/Fig-8]: Monthly variation in the patient presentation with ocular trauma in COVID-19 and post COVID-19 era.

A total of 540 (27.8%) injuries were severe enough to necessitate surgical intervention. The most common surgical procedure performed during the post-COVID-19 period was lid laceration repair (n=369, 19%). Other surgical interventions included corneal perforation repair and conjunctival laceration repair. Evisceration for irreparable open globe injuries was performed in three patients. COVID-19 Polymerase Chain Reaction (PCR) tests were conducted on patients requiring elective surgery under general anaesthesia.

In cases of emergency surgery, the PCR test was administered, and the surgical procedure was carried out with all necessary precautions for COVID-19, as recommended.

DISCUSSION

In present study, the majority of patients were from a rural background. The mean age of patients during the COVID-19 period was lower compared to the post-COVID-19 period, as individuals over 50 years of age presenting with ocular trauma were significantly fewer during the lockdown. Older individuals likely took extreme precautions during both the lockdown and unlock phases, remaining at home due to their heightened vulnerability to COVID-19 infection, which was associated with higher morbidity and mortality. These findings are consistent with a study conducted in Chhattisgarh, India, where the mean age of patients in the pre-COVID-19 and COVID-19 periods was 34.1±20.3 years and 26.7±17.3 years, respectively (p-value=0.008). In both groups, the majority of patients (68.6%) were from rural areas [13]. A study conducted in Italy also reported a decrease in trauma among adolescents and children, likely due to the closure of schools and reduced outdoor activities [16]. Additionally, a study by Pande R et al., reported a 62% reduction in ocular trauma during the lockdown compared to the pre-lockdown period. During the unlock phase, ocular trauma decreased by 21% compared to the pre-lockdown period but increased by 41% compared to the lockdown period. In all three phases, the majority of ocular trauma cases involved middle-aged males from rural areas [17].

In present study, injuries sustained at home were significantly higher than workplace injuries during the COVID-19 period (p-value <0.001). Similarly, home-related injuries were more prevalent during the COVID-19 period (78.8%) compared to the pre-COVID-19 period (36.4%) (p-value <0.0001), as reported by Agarwal D et al., [13]. During the lockdown, there was a notable decrease in outdoor assaults (45%) and RTAs (22%). The incidence of trauma among females (18%) also increased during the lockdown, particularly regarding home-based assaults (150%) and sexual assaults. In contrast, Pande R et al., reported a steady rise in trauma cases, particularly from RTAs and outdoor assaults [17]. These findings differ from a study conducted in the UK, which showed that ocular trauma during the lockdown period nearly tripled compared to the pre-lockdown average, with falls and house improvement projects being the primary contributors to this increase [18].

In present study, the number of patients presenting with closed globe injuries was higher during the COVID-19 period, with corneal epithelial defects being the most common (25.7%) compared to the post-COVID-19 period (p-value=0.002). Conversely, the number of patients presenting with eyelid injuries was higher in the post-COVID-19 period (p-value=0.001). In a study by Agarwal D et al., the most common ocular diagnosis during the COVID-19 period was open globe injury (40.8%), while microbial keratitis (47.9%) was more prevalent in the pre-COVID-19 period [13].

Additionally, Padhan B et al., reported a range of ocular injuries, including 54 (42%) cases of ecchymosis, 33 (24.6%) with subconjunctival haemorrhage, 25 (19%) with lid laceration, 14 (10.4%) with traumatic mydriasis, 11 (8.4%) with corneal rupture, 4 (3%) with orbital floor fracture and 7 (5%) with traumatic cataract and hyphema. Furthermore, 39 (30%) of the injured individuals reported domestic violence as the cause, followed by 26 (28%) from RTA, 19 (15%) from some form of assault (non domestic), and 17 (13%) from falls [19].

In present study, sharp particles (21.4%) were the most common agents causing ocular trauma during the COVID-19 period, whereas in the post-COVID-19 period, plant leaves (20.3%) and animal-related injuries (15.3%) were more prevalent. Similarly, a study by

Agrawal D et al., found that iron particles (29.5%) were the most common inflicting agents during the COVID-19 period, while plant leaves (25.5%) were the leading cause of injuries in the pre-COVID-19 period [13].

The proportion of patients presenting with blindness due to trauma was higher during the COVID-19 lockdown period (10.1%) compared to the post-COVID-19 period (9%). Present study also observed a delay in the presentation of patients with ocular trauma during the COVID-19 period. A similar study conducted in the USA reported that patients experienced delayed hospital presentation due to financial and transportation challenges, alongside an increase in ocular trauma occurring in home settings [20].

Nevertheless, this was the first study from India to compare the pattern of ocular trauma during the COVID-19 period with that of the post-COVID-19 period. While numerous studies have compared the pattern of ocular trauma between the COVID-19 and pre-COVID-19 periods, present study uniquely addresses the comparison between the COVID-19 lockdown and the post-lockdown phase [13,17,19].

Limitation(s)

The limitations of the present study include its retrospective design and the fact that it was conducted at a single institution, which may introduce sampling bias. Additionally, the study was carried out at a single tertiary care hospital, limiting the generalisability of the findings. Moreover, barriers to accessing eye care services among patients visiting the hospital was not explored, which could provide further insight into the factors influencing timely treatment.

CONCLUSION(S)

During the COVID-19 lockdown, present study observed a significant decline in the number of patients presenting with ocular trauma. However, the majority of ocular injuries occurred as a result of household activities during this period. Increased awareness among the general population, especially among parents of children, along with preventive measures, could help reduce the incidence of ocular morbidity and blindness related to domestic activities. Furthermore, parents should enhance supervision and safeguard their children, particularly in their handling of potentially hazardous items, to prevent accidental ocular trauma due to developmental immaturity. Given that ocular trauma frequently results in poor visual outcomes and blindness, early diagnosis and timely intervention are crucial.

The time delay between injury onset and presentation was common during the lockdown, which may have exacerbated symptoms. Limited access to healthcare services likely played a key role in these delays. Remote ophthalmic consultations could be an effective strategy in providing timely specialised care, as demonstrated in several countries. This approach would help direct medical resources toward emergency cases of severe ocular trauma. Additionally, making ophthalmic services more accessible in remote areas would reduce the risk of viral transmission by minimising visits from non emergency patients.

REFERENCES

[1] Timeline of WHO's response to COVID-19 [Internet]. World Health Organization. Published 2020. [cited 2020 Aug 04]. Available from: https://www.who.int/news-room/detail/29-06-2020-covidtimeline.
[2] Wikipedia contributors. COVID-19 lockdown in India. Wikipedia, The Free Encyclopedia. March 19, 2025, 06:38 UTC. Available from: https://en.wikipedia.org/w/index.php?title=COVID-19_lockdown_in_India&oldid=1281249923. Accessed March 28, 2025.
[3] Nair AG, Gandhi RA, Natarajan S. Effect of COVID-19 related lockdown on ophthalmic practice and patient care in India: Results of a survey. Indian J Ophthalmol. 2020;68:725-30.
[4] Sengupta S, Honavar SG, Sachdev MS, Sharma N, Kumar A, Ram J, et al. All India Ophthalmological Society-Indian Journal of Ophthalmology consensus statement on preferred practices during the COVID-19 pandemic. Indian J Ophthalmol. 2020;68:711-24.
[5] Dulal S, Ale JB, Sapkota YD. Profile of pediatric ocular trauma in mid western hilly region of Nepal. Nepal J Ophthalmol. 2012;4(1):134-37.
[6] Lavaju P, Badhu BP, Shah S. Clinical profile and factors determining the final visual outcome of patients presenting with ocular trauma. Delhi J Ophthalmol. 2018;29(1):14-19.
[7] Marta A, Silva N, Correia N, Pessoa B, Ferreira N, Beirao M, et al. A 15-year retrospective epidemiologic study of ocular trauma in the north of Portugal. Eur J Ophthalmol. 2021;31(3):1079-84.
[8] Maurya RP, Srivastav T, Singh VP, Mishra CP, Al-Mujaini A. The epidemiology of ocular trauma in Northern India: A teaching hospital study. Oman J Ophthalmol. 2019;12(2):78.
[9] Mir TA, Canner JK, Zafar S, Srikumaran D, Friedman DS, Woreta FA, et al. Characteristics of open globe injuries in the United States From 2006 to 2014. JAMA Ophthalmol. 2020;138:268-75.
[10] Low L, Hodson J, Morris D, Desai P, MacEwen C. Socioeconomic deprivation and serious ocular trauma in Scotland: A national prospective study. Br J Ophthalmol. 2017;101:1395-98.
[11] Kanoff JM, Turalba AV, Andreoli MT, Andreoli CM. Characteristics and outcomes of work-related open globe injuries. Am J Ophthalmol. 2010;150:265-9.e2.
[12] Chang A, Schnall AH, Law R, Bronstein AC, Marraffa JM, Spiller HA, et al. Cleaning and disinfectant chemical exposures and temporal associations with COVID-19-National Poison Data System, United States, January 1, 2020–March 31, 2020. Morb Mortal Wkly Rep. 2020;69(16):496.
[13] Agrawal D, Parchand S, Agrawal D, Chatterjee S, Gangwe A, Mishra M, et al. Impact of COVID-19 pandemic and national lockdown on ocular trauma at a tertiary eye care institute. Indian J Ophthalmol. 2021;69:709-13.
[14] KV V, Vijayalakshmi P. Understanding definitions of visual impairment and functional vision. Community Eye Health. 2020;33(110):S16-S17.
[15] Kuhn F, Morris R, Witherspoon CD. Birmingham Eye Trauma Terminology (BETT): Terminology and classification of mechanical eye injuries. Ophthalmol Clin North Am. 2002;15(2):139-43.
[16] Pellegrini M, Roda M, Di Geronimo N. Changing trends of ocular trauma in the time of COVID-19 pandemic. Eye (Lond). 2020;34:1248-50.
[17] Pande R, Mohod SS, Padmapriya V, Shanbhag S, Kumar NS. Impact of the COVID-19-induced lockdown on the incidence of ocular trauma presenting to a tertiary care hospital. BMJ Open Ophthalmol. 2022;7:e000861.
[18] Stedman EN, Jefferis JM, Tan JH. Ocular trauma during the COVID-19 lockdown. Ophthalmic Epidemiol. 2021;28:458-60.
[19] Padhan B, Satpathy B, Behera S, Chowdhury RK, Mohanty DJ. Clinico-epidemiological profile of ocular injuries during COVID-19 lockdown at a tertiary care center in Western Odisha: An observational study. Odisha J Ophthalmol. 2022;29(1):32-37.
[20] Wu C, Patel SN, Jenkins TL. Ocular trauma during COVID-19 stay-at-home orders: A comparative cohort study. Curr Opin Ophthalmol. 2020;31:423-26.

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