

RESEARCH ARTICLE

OCULAR EMERGENCIES DURING COVID-19 NATIONAL LOCKDOWN

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Manuscript Info Abstract Manuscript History Purpose: This survey was conducted to study the incidence of ocular Received: 20 May 2020 emergencies during the lockdown period imposed by government of Final Accepted: 24 June 2020 India due to the coronavirus. Published: July 2020 Methods: All the ocular emergencies coming to the ophthalmology casualty during the lockdown period were included in our study. Brief Key words:history with relevant ocular examination & evaluation was done. All Lockdown, Covid-19 Pandemic, Ocular valid responses were tabulated & analysed. Relevant treatment was Emergency given. **Results:** A total of 64 ocular emergencies were recorded during the study period. 57 cases were trauma (89.06%) to the eye. 3 (4.69%) phacomorphic glaucoma cases, 3 (4.69%) cases of angle closure glaucoma & 1 (1.56%) case of neovascular glaucoma were the other emergencies. Conclusion: Our study shows that with near-total cessation of elective surgeries there was a significant rise in ocular emergencies more from the rural areas. With kids being the major victim, it can be concluded that lockdown was fatal to them with inadequate monitoring. Copy Right, IJAR, 2020,. All rights reserved.

Introduction:-

In early 2020, through genomic sequencing, a novel virus, called Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2); also known as 2019 novel Coronavirus (2019-nCoV) started spreading across the globe, following which the WHO declared it as a pandemic. ⁽¹⁾ the global pandemic led many governments across the globe to take swift protective measures. Given the large population of over 1.3 billion, the government of India, declared a total lockdown across the country as a part of its efforts to control the disease. The restrictions came into force at midnight local time on 24th March 2020 for 21 days & this was further extended for 19 more days and another 14 days subsequently. ⁽²⁾ As a result of this lockdown, all regular out-patient departments across hospitals and clinics in India were to be shut and it was advised that all elective surgeries be deferred, but emergency healthcare services continued to function. As a result of this step, ophthalmologists across the country temporarily ceased clinical services at their respective practice locations. Despite emergency services being kept open we saw an increase in the number of ocular emergencies. With this background, this study was conducted to assess the impact of the COVID-19 related lockdown on ophthalmic emergencies and patient care in India.

Methods:-

An observational study of all the patients attending OPD at our institute with an emergency during the period from March 24 to May 24 (3 lockdowns) were included in the study. The ethical committee of our hospital was briefed

Corresponding Author:- Dr. Aditi Pai Address:- Department of Ophthalmology, Baroda Medical College, Vadodara, Gujarat, India. about the study regarding the rationale, nature & procedure of the study & approval was obtained from the committee. A total of 64 patients were examined & data was collected. The demographic data of each patient including age, sex, address, occupation & financial status were recorded. A detailed history was obtained regarding the emergency, its nature & circumstances. Patients residing in the taluka or a smaller place with no district hospital were labelled as rural. The literacy was determined on the basis of educational status as told by the patient. Due precaution and care was taken by the health personnel while handling every case, so as to not contract the virus. Detailed ophthalmological examination of all patients was carried out. Snellen's chart was used to record visual acuity. Slit lamp examination, 90D examination & indirect ophthalmoscopy was carried out. Intraocular pressure was measured with Goldman applanation tonometer wherever possible. Gonioscopy was done in closed globe injuries and cases of angle closure. Radiological investigations like X-Ray orbit, CT Scan, MRI were done as indicated. Complete details of ophthalmological examination included initial best corrected visual acuity, ruling out any eyelid injury, conjunctival tear or subconjunctival haemorrhage, examination of the cornea for foreign body, abrasion, laceration or perforation, any scleral tear or laceration, ruling out hyphaema, iris injuries or afferent papillary defect. Examination of posterior segment was carried out for detection of vitreous haemorrhage, retinal detachment, retinal break or tear, choroidal rupture, choroidal haemorrhage or subretinal haemorrhage. The record of previous treatment, if any, was obtained from the patient and findings at the time of initial examination were noted. The patients were followed up after two days, one week, two weeks & thereafter as per requirement. All the terminologies were based on BETTS i.e. Birmingham Eye Trauma Technology ⁽³⁾. It establishes easy to use, unambiguous terminology organized in a clinically relevant design.

AGE GROUP(Years)	MALE		FEMALE		TOTAL	
	Cases	%	cases	%	cases	%
upto 15	16	45.17	9	40.91	25	46
16-30	11	31.43	6	27.27	17	30
31-45	2	5.71	2	9.09	4	6
46-60	3	8.57	2	9.09	5	8
above 60	3	8.57	3	13.64	6	10
Total	35	100	22	100	57	100

Age & sex distribution of ocular trauma:

Age distribution of ocular trauma:



Causative agent for ocular trauma

Causative Agent	No. of cases	%
wooden stick/rod	30	52.63
Pens, knife	12	21.05

finger	5	8.77
animal horn/tail	5	8.77
blunt	3	5.26
chemical	2	3.52
Total	57	100

Causative agent for ocular trauma:



Total emergencies presented:

Emergencies	cases	%
trauma	57	89.06
phacolytic glaucoma	3	4.69
angle closure glaucoma	3	4.69
neovascular glaucoma	1	1.56
	64	100

Total emergencies presented (%):



Yearly comparison of ocular emergencies:



Statistics:

All data was collected and tabulated on Microsoft excel sheet and analysed using SPSS software

Results:-

A total of 64 emergency cases presented during the period of 2 months of lockdown. The trauma cases formed the bulk with 57 (89.06) cases. The number of persons sustaining injuries was highest i.e. 25 (46%) in the age group of 1 to 15 years followed by 17 (30%) cases in the age group of 16 to 30 years. There was a presentation of 4 (6%) cases in the age group 31-45 years, 5 (8%) in the age group 45-60 years and 6 (10%) in the age group >60 years respectively. 16 cases (45.17%) were found to be males in the age group of <15 years. 9 cases (40.91 %) were females in the same age group. Most of the cases sustaining injury sustaining injury in <15 years was due to sharp objects like wooden sticks and iron rods. Most of the patients had involvement of only one eye, right eye being involved in 80 (80%) cases, left eye being involved in 18 (18%) cases & both eyes were involved in only 2 (2%) cases. 42 cases (73.68%) of cases were due to sharp objects like wooden sticks, rods, knife and pens. 5 cases (8.77%) each were due to fingers and animal parts like horns and tails. 3 cases (5.26%) were due to blunt trauma, followed by another 2 (3.52%) cases caused by chemical injury. Along with this 3 (4.69%) patients presented with phacolytic glaucoma, 3 (4.69%) cases were of angle closure glaucoma and 1 (1.56%) case of neovascular glaucoma.

Discussion:-

COVID-19 pandemic is the biggest crisis witnessed by this generation and the disruption to normal life has been on an unprecedented scale in recent times. With India in total lockdown, majority of the stand-alone private practitioners had closed their practices and were not actively involved in direct patient care. Most of the ophthalmologists working in large institutes and government hospitals were seeing and operating cases as they were better equipped in terms of staff, protective equipment, medicines, and in-patient facilities for isolation. With the clinicians themselves being available, the unavailability of managerial, administrative, nursing and other support staff were posing logistical and operational challenges to running a health care facility in times of a pandemic. Majority of the stand-alone private practitioners (601/775; 77.5%) had closed their practices and were not actively involved in direct patient care⁽⁴⁾. With 90% of the population at home, this can be a likely cause of rise in ocular emergencies, trauma in particular ⁽⁵⁾.While emergencies such as trauma and other conditions that qualified for emergent care, based on the judgement of the clinician, remained the most common procedures being performed. There was a three-fold rise in ocular trauma during the lockdown period as comparison with the same period of last year. With children being most affected, it was found that broadcasting mythological series had influenced the use of bow & arrow and a significant rise in ocular trauma due to sticks & rods. This along with closure of most of the private practising ophthalmologists may have lead to the four-fold rise in the number of ocular trauma presenting to our tertiary center.

Conclusion:-

The lockdown, which was a first in the country, brought with it, many uncertainties; not just on the personal front but also on the professional front for most medical practitioners. The eye care system was severely impacted with the closure of majority of the eye doctors in the country. This led to skewed management in the treatment of the ocular emergencies thus exposing a probable negativity in our health system. Guidelines have been introduced to start ocular treatment with the pandemic between us. Having known the pandemic for the last five months, it is reasonable to assume that the unwelcome guest is here to stay in some form or the other for years to come. With lockdown coming to an end and also with opening of the ophthalmologists across the country there may be a fall in the ocular trauma in the coming months.

Acknowledgement:-

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Financial Interest:

None.

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