



Editorial

Ocular trauma during COVID- 19 crisis: Trends and management

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Dear Friends

Season's Greetings!

The outbreak of new 2019 novel corona virus disease (COVID-19) has created serious global threat. During the early phase of pandemic, strict control measures had been implemented such as home isolation, social distancing, restriction on unnecessary travel and outdoor activities. This resulted in unprecedented changes in the lifestyle of people, their psychological state and to the health care system.¹ COVID-19 crisis has affected ocular trauma in many ways. Several studies have highlighted the changing trends in ocular trauma during the pandemic. The changes have been reported in incidence, epidemiology, mechanism, type of ocular trauma and the way of treatment.

Overall the incidence of trauma has been reduced during the pandemic. Christey et al. reported a 43% reduction in injury related hospitalization.² Pellegrini et al. from Italy reported a striking 68.4% decrease in the number of eye trauma during the first month of the pandemic as compared to the same period of previous year.³ They reported highest decrease in sport related ocular injuries (from 6.5% to 0.9%). Ocular trauma of mild to moderate severity was expected during a pandemic due to restricted travels and other outdoor & risk taking activities. There has been a reported increase in the household related ocular injuries during the pandemic.^{4,5} The reported incidence of severe ocular trauma occurring at home during pre-COVID period ranges from 34-48%.^{6,7} Connine Wu from USA reported the occurrence of only 5.9% (62 out of 1058 injury) severe

ocular trauma during COVID related home stay, amongst them 84% (52 out of 62) sustained injuries at home.

It has been reported that there was a significant reduction in the number of polytrauma cases due to road traffic accidents and an increase in domestic violence and self-inflicted injury cases during the early COVID crisis due to total lockdown & home stay.^{8,9} The lockdown resulted in a probable increase in the prevalence of alcohol consumption¹⁰ which is also an important risk factor for trauma due to physical assault.

The COVID-19 pandemic has changed the course of practice pattern in ocular traumatology owing to the relevant diagnostic and surgical procedures done in case of ocular trauma which are often associated with risk of exposure and transmission of the virus. The eye injuries associated with pan-facial trauma, lid laceration involving nasolacrimal system and naso-ethmoidal orbital fracture are at highest risk due to the high chance of an aerosol-generation and contact with patient's secretions (such as tear, mucous and blood, etc.), therefore all universal precautions should be taken, assuming that the patient is a case of COVID-19.

The elective ophthalmic surgeries have therefore been deferred worldwide during the pandemic.¹¹ However, majority of ocular trauma is an emergency, and the treatment cannot be deferred. Although some ocular injuries are not emergency (minor/ superficial injuries and simple uncomplicated orbital fractures) and can be managed in a delayed fashion. The trauma surgeon must weigh the risk and benefits of a delayed conservative approach to the eye

injury. If surgical intervention is chosen over observation /conservative treatment, every effort should be made to reduce the overall patient stay at the hospital, limit the number of patient care providers and if possible provide trauma care on an OPD basis. Most of the institutions adopted COVID-19 testing of patients and their care provider before hospitalization.

Always follow the basic guidelines for ocular trauma surgery during COVID-19 pandemic;

1. Avoid general anesthesia if possible.
2. PPE for all medical and non-medical supportive staffs as per Government guidelines.
3. Only the essential anaesthetic and allied health staff should be present in the operation theater.
4. Surgeon and their assistant should be outside during intubation and extubation.
5. Use of aerosol protective devices during intubation and extubation.
6. The multidisciplinary surgery should be done in the same setting to avoid repeated exposure to anesthesia.
7. Avoid use of monopolar cautery for cutting and coagulation, better to use bipolar cautery in low power setting.
8. If a planned second surgery is required, it should be performed at least 2 weeks after the primary procedure.¹²

Minimum post-operative follow-up visit is recommended. Telemedicine should be utilized effectively for post-operative follow-up without compromising treatment outcome.

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