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The impact of covid-19 on ophthalmic practice in Bangladesh– A cross-sectional study

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ABSTRACT

Purpose: To assess the interference of patient care due to COVID 19 related restrictions and to formulate the future guidelines.**Methods:** This cross-sectional online survey-based study was carried out among the ophthalmologist of Bangladesh in the early lock down period (01 April to 30 April) 2020.**Results:** Total 93 ophthalmologists responded to the study. Most of the ophthalmologist were seeing the patients with red eye (40.9%), ocular trauma (40.9%), acute infections and inflammations (35.5%), and vision loss (31.2%). 80.6% responder informed that they wear Mask, gloves, and head cap during patient evaluation. 51.6% used Personal protection equipment. 55.9% used a breath shield with the slit lamp settings. 60.4% maintained hand wash, and disinfectant facilities for the patients. 85.7% ophthalmologist had ensured for wearing the mask to all patients before entering the examination and consultancy room. 86% ophthalmologist of our study had performed their surgeries for ophthalmic emergency.**Conclusions:** Wearing mask is an important tool to prevent transmission of COVID-19 for both patients and ophthalmologists in working place. Maintaining normal ophthalmic practice and surgery are challenging during COVID-19 pandemic.© This is an open access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

1. Introduction

COVID-19 has been declared as a public health emergency of international concern.¹ It was called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which spreads primarily through nasal discharge or droplets of saliva from a Covid-19 infected person. There is a chance to transmit from person to person who is in close contact within six feet. Moreover, the virus may transmit by touching a surface or an object with virus-containing respiratory droplets or touching the eyes, mouth or nose. The mode of transmission may be necessary as

coronavirus has been isolated from surfaces several days from dissemination.²

As the number of SARS-CoV-2-positive cases increases, affected patients might frequently present to eye clinics or emergency departments. Asymptomatic Covid-19 patients may have direct contact with an Ophthalmologist during an ophthalmic examination.³ A recent report suggested that ocular surfaces may be a potential mode of SARS-CoV-2 transmission and Ophthalmologists are highly prone to get infected.⁴ The knowledge that we have on the ophthalmic implications of the SARS-CoV-2 virus is limited and constantly evolving.⁵ Lai et al.² reported infection control measures that were based on a three-level hierarchy: uses of personal protective equipment (PPE), protective

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measures and hygiene control for all, environmental control and administrative responsibility. We attempt to assess the interference of patient care due to COVID 19 related restrictions and to formulate future guidelines.

2. Materials and Methods

Patients were not involved in this research. This cross sectional online survey based study was carried out among the ophthalmologist of Bangladesh in the early lock down period from 01 April to 30 April 2020. We circulated a pre-planned questionnaire through social media and email to 150 ophthalmologists in Bangladesh. All online responders were included in this study. Residents, trainee and ophthalmologist who were suffering from COVID-19 were excluded from this study.

3. Results

A total of 93 ophthalmologists responded to the study. 92% of ophthalmologist had practiced in the early lockdown period in 2020. Most of the ophthalmologist had found the patients with red eye (40.9%), ocular trauma (40.9%), acute infections and inflammations (35.5%), and vision loss (31.2%). 53.8% of ophthalmologist exclaimed that they examined only emergency patients as per judgment. 80.6% of responders informed that they wear Mask, gloves, and head cap during patient evaluation. 51.6% used Personal protection equipment. 55.9% used a breath shield with the slit lamp settings.

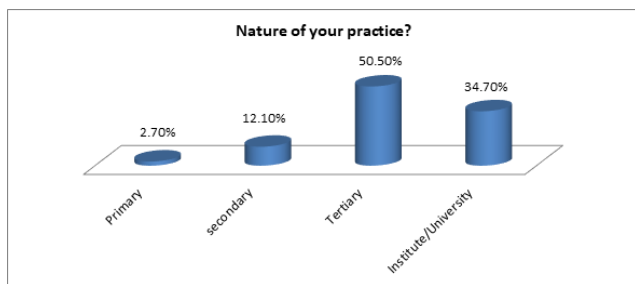


Fig. 1:

A detail history regarding recent fever, cough, travel information, quarantine, Covid-19 test result and other relevant situation had been taken from the patients by 14% of ophthalmologist. 60.4% maintained hand wash, and disinfectant facilities for the patients. 85.7% of ophthalmologist had ensured for wearing the mask to all patients before entering the examination and consultancy room. 86% of ophthalmologist of our study had performed their surgeries for ophthalmic emergency.

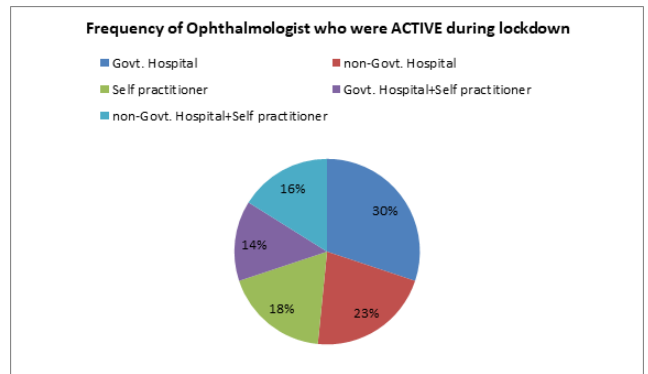


Fig. 2:

Table 1: Showing the various measures taken by the ophthalmologist during the lockdown period and the frequency of using them

No.	Measures	Percentage
1	Wearing Mask, gloves, and head cap during patient evaluation	80.6%
2	Using Personal protection equipment	51.6%..
3	Using a breath shield with the slit lamp settings	55.9%.
4	Detail history taking	14%
5	Keeping hand wash, and disinfectant facilities for the patients.	60.4%
6	Wearing the mask to all patients	85.7%

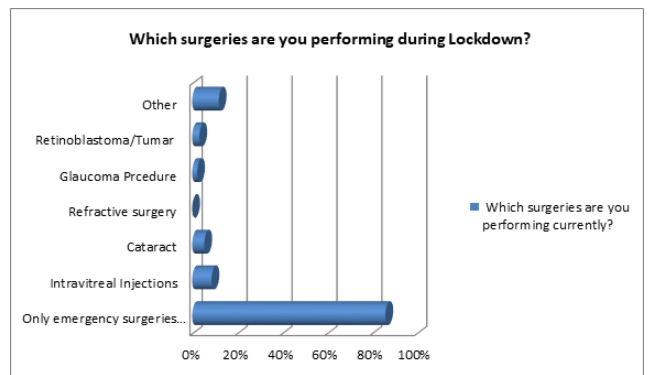


Fig. 3:

4. Discussion

We discussed the consequences of the COVID-19 pandemic on ophthalmology practice in a referral hospital setting as a practice protocol should be established including infection control measures and several significant modifications of daily work to minimize infection of both the eye care providers and the patients.

The current cross-sectional study aimed to explore COVID-19 related experiences and perceptions of ophthalmologist in Bangladesh. As stated in the Center

for Disease Control and Prevention (CDC), international ophthalmic societies, and hospitals were requested to postpone routine services such as outpatient clinics and elective surgical procedures to reduce COVID-19 transmission risk and conserve healthcare resources.^{4,6} Our data clearly illustrates the significant impact of these measures on the ophthalmologist in Bangladesh.

A total of 93 ophthalmologists responded to the study. 92.5% of ophthalmologist had practiced in the lockdown period, and 50.5% were working at the tertiary level eye centers. Similar data was found by Nair AG et al.⁷ This is understandable since large hospitals tend to be better equipped in terms of staff, protective equipment, medicines, and in-patient facilities for isolation.

Globally, the supply of personal protective equipment (PPE) is limited. The WHO has released guidance on optimizing the PPE supply in case of shortage.⁴ In this study, we investigated the availability of PPE for an ophthalmologist. Our data indicated that most responders wear mask, gloves, and head cap during patient evaluation. A significant number of participants used Personal protection equipment, and 55.9% used a breath shield with the slit lamp settings. A detailed history regarding recent fever, cough, travel information, quarantine, Covid-19 test result and other relevant situation had been taken from the patient's or the attendance by 14% ophthalmologist. 60.4% maintained hand wash and disinfectant facilities for the patients. 85.7% of ophthalmologists had ensured for wearing the mask to all patients before entering the examination and consultancy room. Regarding guidance for outpatient clinics and elective surgery, the American Academy of Ophthalmology supports the recommendation from the American College of Surgeons and the guidelines from the CDC regarding postponing elective surgeries.⁸ It was also recommended that ophthalmology offices should for now continue to provide only emergent/urgent care making efforts to decompress their waiting areas, and considering alternatives such as encouraging patients to wait in other locations (e.g., their cars or outdoor spaces). Mobile phone calls or other approaches could be used by office staff to notify patients when they should return to the office. Telemedicine should be used as much as possible for screening and for no urgent patient concerns.⁹

The study subjects believed in a significant reduction in routine outpatient care and a dramatic decline in exposure to surgical training and minor procedures such as injections and lasers. However, no changes were noted in emergency care exposure as emergency departments continued to run normally during the lockdown and 86% of ophthalmologist of our study had performed their surgeries for ophthalmic emergency & 53.8% of ophthalmologist exclaimed that they examined only emergency patients as per judgment. These findings are almost the same as the recently published data from various ophthalmic hospitals worldwide.^{4,7}

5. Conclusions

With the expansion of COVID-19 scenarios and its high contagiousness that threaten health workers. Maintaining protective measures are helpful to reduce the crucial risk of infection for ophthalmic providers and patients. Strict following recommended guidelines from several formal ophthalmology associations and the experience of other colleagues, a recommended practice protocol can help overcome the unfavorable consequences. The benefits of these rearrangements are remaining to be proven. Wearing a mask plays a vital tool to prevent transmission of COVID-19 for both patients and ophthalmologist in working place. Maintaining regular ophthalmic practice and surgery are challenging during the COVID-19 pandemic. With few precautions and modification of working formulation may overcome these scenarios.

6. Source of Funding

None.

7. Conflict of Interest

The authors declare that there is no conflict of interest.

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