

One Eye Conjunctivitis Only Sign and Symptom of COVID-19: A Case Report

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Abstract: *The symptomatic patients infected by SARS-CoV-2 generally show respiratory distress, pneumonia, sore throat, fever. Atypical manifestations such as conjunctivitis is also seen. Cases are reported in which reverse transcriptase polymerase chain reaction (RT-PCR) testing on tears had demonstrated the presence of the virus. However, the transmission of the virus through ocular fluids is not known. Here we report a case of 45 yr male with COVID disease and only sign is conjunctivitis in one eye.*

1. Introduction

Coronavirus Disease 2019 (COVID-19) is a highly contagious newly recognized infection that has a significant worldwide impact on mortality and economic morbidity. It is not yet confirmed whether the disease started from bats or not. However, the current wild spread is due to human-to-human transmission through droplets and direct contact with the mucous membranes including eyes, nose, or mouth.

The causative organism is a beta coronavirus, which belongs to coronaviridae family. It is an enveloped single-stranded RNA virus, which is closely related to the severe acute respiratory syndrome coronavirus. It has been named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Phylogenetic analysis showed that there are more than 100 strains of SARS-CoV-2 with two different types; type L and type S. The receptor-binding region of SARS-CoV-2 is also similar to SARS-CoV. For entry into the cell, the virus uses angiotensin-converting enzyme 2 receptor (ACE2). ACE2 receptors were found in conjunctiva and cornea, although the receptor density in ocular tissues was lower.

Here, we present a case report of a 45yrs old male patient diagnosed with COVID-19 who experienced conjunctivitis as the first and sole symptom of the disease. We believe it is essential for healthcare practitioners who play a significant role in the battle against the pandemic, to be knowledgeable about this problem and to take necessary steps to prevent the spread of the disease.

2. Case Description

A 45-year-old otherwise healthy male working as farmer presented to the ophthalmology OPD, civil hospital Jhajjar on July 5 2020, with one day history of redness, stinging, watery discharge, and in his left eye. The patient had no symptoms of fever, cough, shortness of breath, or general malaise. In his story, he did not declare any travel abroad in the last 14 days but contact history with covid patient was there. Nasopharyngeal swab tests for SARS-CoV-2 were recommended .RT-PCR tests done on same day which came positive next day. In his ophthalmic examination, the visual acuity was 20/20 for both eyes without correction. Intraocular pressure was 12 mmHg on the right and 13mmHg on the left eye. Slit-lamp examination of the left eye revealed eyelid edema and serous secretion with 2+

conjunctival injection, mild chemosis, and follicular reaction in the upper and lower fornices

The cornea was transparent, and no sign of inflammation was detected in the anterior chamber. Fundus examination revealed vital optic disc and macula. Anterior and posterior segment examination of the left eye was normal. Physical examination did not show any tenderness or enlargement of the submandibular, preauricular, cervical lymph nodes.



Figure 1: A follicular conjunctival reaction in the upper and lower fornices, serous secretion, and mild chemosis in the left eye of the patient

Considering acute conjunctivitis, moxifloxacin eye drop QID and artificial tears without preservative QID were prescribed for 7 days. His chest x ray showed no signs of pneumonia (Figure 2). The routine blood examination was normal. He started taking systemic hydroxychloroquine and azithromycin for 5 days and instructed to self-quarantine until the complete resolution of the infection. Conjunctival swab samples were obtained by sweeping both fornices with sterile cotton swab without topical anesthesia. The swabs were inserted into a viral transport medium in ice before being tested for SARS-CoV-2. The patient had negative RT-PCR results for eye samples. Adenovirus tests was negative.



Figure 2: Chest x ray of the pulmonary showing no sign of pneumonia.

3. Conclusion

Ocular diseases caused by coronaviruses are relatively rare compared to adenovirus and influenza viruses. Although it is known that the main route of transmission of the SARS-CoV-2 is through the respiratory tract, several studies have raised concerns due to infection in the unprotected eyes. So far, it has not been established whether ocular secretions are infective.

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