Ophthalmic care in primary care and the sars CoV-2 infection.

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Abstract

Severe Acute Respiratory Coronavirus, the virus responsible for the ongoing pandemic of Coronavirus Infectious Disease-19 (COVID-19), was initially thought to be a respiratory one but found later that it can infect any organ and system of the body. The presentations initially; were more typical of respiratory ones. However, later on, asymptomatic patients with the atypical presentation were surfaced. One of the non-respiratory organs infected is the eye.

The clinical manifestations of SARS CoV-2 infection range from the most frequent ones of conjunctivitis to more severe complications; that may be seen either in the early stages of infection or in the recovery phase. These manifestations overlap the symptoms seen in other viral infections of the eye.

Therefore, it is challenging for family physicians or generalists working at the first point of contact where the majority of the patients seek services. The first-level responders should know ophthalmic manifestations of the infection: and be vigilant to sort out cases; of SARS CoV-2 induced ocular infections: while protecting them from acquiring infection and initiating management as per protocols to save lives and prevent ocular complications.

Keywords: SARS CoV-2, COVID-19, Pandemic, Ophthalmic manifestations.

Introduction

The coronavirus infectious disease -19 (COVID-19), caused by severe acute respiratory syndrome coronavirus-2 (SARS CoV-2), emerged in Wuhan, China [1], in late December 2019 swiftly spread worldwide. On March 11, 2020, the World Health Organization (WHO) declared it a global pandemic [2]. As of February 24 2022, the worldwide COVID-19 confirmed infection surpassed over 429 million and over 5.9 million mortalities [3].

The clinical diagnosis of SARS CoV-2 infection is challenging due to non-pathogenic symptoms of the virus, thus necessitating laboratory confirmation by Reverse Transcriptase Polymerase Chain Reaction (rt-PCR). In the early days of the pandemic, the virus was considered a respiratory one that infects the respiratory system with clinical findings of typical respiratory ones. However, non-respiratory features surfaced with time, linking other systems and organs involved with the virus leading to atypical clinical features, including ophthalmic.

The eye may be infected: in isolation or conjunction with other organs or systems of the body. The SARS CoV-2 infects the eye the same way it infects other organs by binding to angiotensin-converting enzyme-2 (ACE-2) receptors found on the eye cells [4]. The second route of viral transmission is through absorption of the virus in the tear [5] indicates the port of entry for the virus. Thus, physicians should use face shields to protect their eyes from SARS CoV-2 infection.

In the cross-sectional study of [6] in Wuhan, China, conjunctivitis could be the first presenting symptom or late after other COVID-19 symptoms had begun. Other studies reported more severe ocular presentation of SARS CoV-2 infection [7]. The systemic literature review and meta-analysis of [8] shows that one out of ten SARS CoV-2 infected patients shows at least one ophthalmic symptom, with an estimated prevalence of 11.03% in the studied population. The common ophthalmic manifestation was conjunctivitis (88.8%) with dryness in the eye, foreign body sensation, redness, tearing, itching, eye pain, and discharge. These symptoms overlap the symptoms of other infections of the eye, such as viruses, bacteria, and allergens [9] making it difficult for the treating physician to differentiate it clinically except with a high index of suspicion and updated knowledge of ophthalmic features of SARS CoV-2. Therefore, the family physicians or generalists working as first-level responders in primary practice; should know the ophthalmic manifestations of the infection and be vigilant to sort out cases of SARS CoV-2 infection presented with ocular manifestations to initiate earlier management as per protocols to save lives and prevent ocular complications.

Conflict of Interest

The authors declare that they have no conflict of interest.

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