

presence of SARS-CoV-2 RNA has been detected in tears and conjunctival exudate¹. Viral tropism to the ocular surface could be explained by the presence of receptors for SARS-CoV-2 in ocular tissue. Angiotensin-converting enzyme receptor 2 and serine transmembrane protease 2, both involved in the cellular infection mechanism, have been detected in the cornea and conjunctiva². However, it seems that the expression of these receptors on the ocular surface and their binding capacity are lower than those of respiratory tissue².

On the other hand, the presence of conjunctivitis has been described as a clinical manifestation associated with COVID-19³. Conjunctivitis is one of the main reasons for ophthalmologic consultation in the emergency department and, in many cases, treated by emergency physicians. Although it is an unusual form of COVID-19, it seems necessary to communicate this fact to the scientific community in order to make them aware of it and to maximize preventive measures during the care process. This conjunctivitis appears as unilateral or bilateral conjunctival hyperemia associated with secretion and is difficult to differentiate from other viral conjunctivitis with the clinical data available to date. Studies published at the beginning of the pandemic detected the presence of SARS-CoV-2 only in ocular fluids of patients with conjunctivitis⁴, probably because at that time only patients with ocular symptoms were studied. However, later studies with a larger number of patients detected the presence of SARS-CoV-2 in patients with and without conjunctivitis, which shows that the presence of the virus in ocular fluids is not conditioned by the presence of conjunctivitis^{1,5}. Despite these relevant findings, PCR (polymerase chain reaction) testing of conjunctival exudate has offered low diagnostic yield to date^{1,4,5}. The factors explaining this low number of positive PCR results from ocular specimens are unknown. It seems that the timing of sample collection, the small amount of ocular fluid sample obtained and the lacrimal drainage system could be some of the factors explaining these results.

Finally, the ocular surface may also represent a pathway for the spread of infection through communication of the ocular surface with the respiratory and gastrointestinal tract via the lacrimal drainage system. Consequently, the eye may represent not only a route of access, but also a route of spread of infection.

In conclusion, given the current epidemiological situation and the high transmission capacity of the virus, avoiding contact with ocular fluids and the use of eye protection by emergency personnel seems to be a justified preventive measure for the transmission of SARS-CoV-2 infection.

Noemi Güemes-Villahoz¹,
Bárbara Burgos-Blasco¹,
Francisco Javier Martín-Sánchez²

¹Department of Ophthalmology, Hospital Clínico San Carlos, Madrid, Spain.

²Department of Emergency Medicine, Hospital Clínico San Carlos. Instituto de Investigación Sanitaria del Hospital Clínico San Carlos (IdiSCC). Complutense University of Madrid, Madrid, Spain.
noemiguemes@gmail.com

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Eye protection in the emergency department: SARS-CoV-2 transmission through the ocular surface

Protección ocular de la transmisión de SARS-CoV-2 a través de la superficie ocular en urgencias

To the editor:

The main route of transmission of severe acute respiratory syndrome type 2 coronavirus (SARS-CoV-2) infection is the airborne route via respiratory droplets. However, there are other transmission pathways that should not be ignored, including the ocular surface. In this regard, the