

COVID-19: Eyes May Play a Role in Spreading the Virus

Víctor Manuel Asensio-Sánchez*

Ophthalmology Department, Clinical University Hospital of Valladolid, Valladolid, Spain

***Corresponding Author:** Víctor Manuel Asensio-Sánchez*Ophthalmology Department, Clinical University Hospital of Valladolid, Valladolid, Spain.

Received: February 14, 2020; **Published:** March 04, 2020

Coronaviruses are a large family of viruses that can cause respiratory, or gastrointestinal infections. Most people get infected with human coronaviruses at some time in their lives, but usually causes mild to moderate illnesses. Rarely, coronaviruses can evolve and passes from an animal to a human. In some cases, zoonotic coronaviruses have emerged causing human outbreaks, such as Severe Acute Respiratory Syndrome-Related coronavirus (SARS-CoV) in 2003 and the Middle East Respiratory Syndrome (MERS-CoV) in 2012 [1-3]. In December 2019, a newly identified coronavirus called COVID-19 (formerly known as Wuhan coronavirus and 2019-nCoV) has been spreading in China and has now reached at least 26 other countries. COVID-19 is most closely related to SARS-CoV and is believed to have originated in bats, however, other animal species can also act as an intermediate host in the transmission to humans. As regards the COVID-19, epidemiological and serological information is still lacking, limiting our ability to describe the full disease spectrum caused by this virus. Currently, 20 - 25% of laboratory-confirmed cases have severe clinical presentations (WHO. Statement on the meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV) 2020 [updated 23 January 2020]). Symptoms reported to date in patients infected with COVID-19 include some combination of productive or dry cough, fever and trouble breathing, with chest X-ray findings of pneumonia (European Centre for Disease Prevention and Control (ECDC). Risk assessment: Outbreak of acute respiratory syndrome associated with a novel coronavirus, Wuhan, China; first update 2020 [updated 22 January 2020]).

It's thought that the Wuhan virus spreads from person to person mainly through airborne respiratory droplets (from the nose and mouth) produced when someone coughs or sneezes, much like the influenza virus spreads, the CDC says. These droplets can land in the eye, mouths or noses of people who are nearby, or be inhaled into the lungs. A top specialist in respiratory diseases contracted COVID-19 when he came into contact with patients. After that, his left eye became inflamed, followed by respiratory distress. He was diagnosed with COVID-19. This real story is a scenario more than possible and not considered: respiratory drops (The Flügge's Drops) of an infected person sprayed in the air during a coughing episode or even during a quiet speech (not travel more than 2m), could reach the eyes of a healthy person. Another possibility is that would spread through hand-to-eye contact or touching contaminated surfaces then rubbing eyes: suggesting an eye transmission route which is highly transmissible (infected people wasn't wearing protective eyewear). I believe that the scientific community has not considered this viral dissemination route: "the coronavirus can spread through the eyes". People are not doing enough to protect themselves: watch TV, everyone wears masks, nobody wears protective glasses, even doctors. Upcoming studies will have to focus if the eye could be a reservoir of the virus. Eye infection would increase the chance of people becoming infected with coronavirus by contact with tears of infected people.

Another similar type of coronavirus (SARS-CoV) spread via the mucous membranes in the eyes: this is an elegant way of saying that without protective eyewear, COVID-19 can get out of control. Our eyes may play an important role in the spread and prevention of the coronavirus.

Bibliography

1. Yin Y and Wunderink RG. "MERS, SARS and other coronaviruses as causes of pneumonia". *Respirology* 23 (2018): 130-137.
2. Drosten C., *et al.* "Identification of a novel coronavirus in patients with severe acute respiratory syndrome". *New England Journal of Medicine* 348 (2003): 1967-1976.
3. Zaki AM., *et al.* "Isolation of a novel coronavirus from a man with pneumonia in Saudi Arabia". *New England Journal of Medicine* 367 (2012): 1814-1820.

Volume 11 Issue 4 April 2020

©All rights reserved by Víctor Manuel Asensio-Sánchez.