



LETTER TO THE EDITOR

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The Latest Pandemic: Covid-19 & Eye

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Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans. Coronaviruses are zoonotic, meaning they are transmitted between animals and people. Detailed investigations found that SARS-CoV was transmitted from civet cats to humans and MERS-CoV from dromedary camels to humans. Several known coronaviruses are circulating in animals that have not yet infected humans. Common signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death(1).

Until the end of December 2019, only six coronavirus species are known to cause human disease. Four of these are, 229E, OC43, NL63, HKU1 and typically cause common cold symptoms in immunocompetent individuals(2). The other two are SARS-CoV (Severe Acute Respiratory Syndrome coronavirus) and MERS-CoV (Middle East Respiratory Syndrome Coronavirus) which cause severe respiratory disease(3).

On 31 December 2019, the WHO China Country Office was in-

formed of cases of pneumonia unknown etiology (unknown cause) detected in Wuhan City, Hubei Province of China. From 31 December 2019 through 3 January 2020, a total of 44 case-patients with pneumonia of unknown etiology were reported to WHO by the national authorities in China. During this reported period, the causative agent was not identified. On 11 and 12 January 2020, WHO received further detailed information from the National Health Commission China that the outbreak is associated with exposures in one seafood market in Wuhan City. The Chinese authorities identified a new type of coronavirus, which was isolated on 7 January 2020. On 12 January 2020, China shared the genetic sequence of the novel coronavirus for countries to use in developing specific diagnostic kits. On 13 January 2020, the Ministry of Public Health, Thailand reported the first imported case of lab-confirmed novel coronavirus (2019-nCoV) from Wuhan, Hubei Province, China(4). On 11 February 2020, WHO announced a name for the new coronavirus disease: COVID-19, and described as Pandemic on 11th of March.

229E, OC43, NL63, and HKU1 are the four coronaviruses that cause common cold symptoms in immunocompetent individuals(2). The other two coronaviruses are — severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV). Both are

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zoonotic in origin and have been linked to sometimes fatal illness(3). Death rates are %10 for SARS (5), and %35 for MERs (6).

WHO has been reported 173.344 confirmed cases, 7019 deaths from 152 countries caused by COVID 19 by the 17th of March 2020(7). The mortality rate is %3.52. The first case has been reported on 11th of March in our country, Turkey.

The most common symptoms of COVID-19 are fever, tiredness, and dry cough. Some patients may have aches and pain, nasal congestion, running nose, sore throat or diarrhea. These symptoms are usually mild and begin gradually. Some people become infected but do not develop any symptoms and do not feel unwell. Most people (about 80%) recover from the disease without needing special treatment. Around 1 out of every 6 people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people, and those with underlying medical problems like high blood pressure, heart problems or diabetes, are more likely to develop serious illness. People with fever, cough and difficulty breathing should seek medical attention(8).

Patients can be afebrile in the early stages of infection, with only chills and respiratory symptoms. High temperature is not a general presentation. Elevated C-reactive protein (CRP) is an important factor of 2019 novel coronavirus disease (COVID-19; formally known as 2019-nCoV) and impaired immunity, characterised by lymphopenia, is an essential characteristic(9).

SARS and MERS spread principally by direct transmission and respiratory droplets. However, SARS-CoV, and perhaps also MERS-CoV, may be shed and be transferred to environmental surfaces, and thence contaminate hands and mucous membranes subsequently(10). People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, then touching their eyes, nose or mouth. People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales droplets. This is why it is important to stay more than 1 meter (3 feet) away from a person who is sick (11).

Ocular involvement has been described with neither MERS-CoV nor SARS-CoV(12-14). But polymerase chain reaction on tears from patients with SARS-CoV infection demonstrated presence of the virus(15). HCoV-NL63 is a coronavirus which has been first isolated from a 7-month-old child who was ad-

mitted to the hospital with coryza, conjunctivitis and fever (16).

Human-to- human transmission is occurring among close contacts, and reports that >1,700 healthcare professionals having been infected with 6 deaths including one ophthalmologist. Of the affected healthcare workers, one was part of the expert task force who visited Wuhan, and he has reflected on his experience of the disease. Despite being fully gowned with protective suit and N95 respirator, he was still infected by the virus with the first symptom being unilateral conjunctivitis, followed by development of fever a few hours later. Since his report, healthcare professionals in China have been urged to use eye protection when they are in close contact with patients(17).

WHO suggests for health workers;

- follow established occupational safety and health procedures, avoid exposing others to health and safety risks and participate in employer-provided occupational safety and health training;
- use provided protocols to assess, triage and treat patients;
- treat patients with respect, compassion and dignity;
- maintain patient confidentiality;
- swiftly follow established public health reporting procedures of suspect and confirmed cases;
- provide or reinforce accurate infection prevention and control and public health information, including to concerned people who have neither symptoms nor risk;
- put on, use, take off and dispose of personal protective equipment properly;
- self-monitor for signs of illness and self-isolate or report illness to managers, if it occurs;
- advise management if they are experiencing signs of undue stress or mental health challenges that require support interventions; and
- report to their immediate supervisor any situation which they have reasonable justification to believe presents an imminent and serious danger to life or health (18).

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