COVID-19 May Initially Affect the Entire Nervous System

Infection with the coronavirus may trigger neurological symptoms before people experience more common signs of illness.

June 15, 2020 By Alicia Green

By now most people know that COVID-19 is a severe respiratory illness caused by the new coronavirus. Meanwhile, medical experts are continuing to learn how this disease affects the entire body. New findings published in the journal Annals of Neurology suggest that COVID-19 can threaten the nervous system, including the brain, spinal cord and nerves, as well as the muscles, reports Northwestern Medicine in Illinois.

Researchers found that about half of hospitalized patients at Northwestern Medicine exhibited neurological symptoms of COVID-19, such as headache, dizziness, decreased alertness, difficulty concentrating, smell and taste disorders, seizures, strokes, weakness and muscle pain.

In some cases, these neurological symptoms have been reported even before other common symptoms of COVID-19, such as fever, cough and shortness of breath.

The review described different neurological conditions that may occur in people with COVID-19 and how to diagnose them. For example, the brain may suffer from lack of oxygen or clotting disorders that could lead to ischemic or hemorrhagic strokes because COVID-19 affects several organs, such as the lungs, kidney and heart.

In addition, the coronavirus could directly infect the brain and meninges (three layers of membranes that protect the brain and spinal cord). This could prompt a reaction from the immune system, causing inflammation that damages the brain and nerves.

Researchers have begun to evaluate the frequency and type of neurological complications experienced by COVID-19 patients hospitalized at Northwestern Medicine, how well individuals respond to treatment and whether these problems are temporary or permanent.

Such studies will help scientists learn how to diagnose, manage and treat the neurological manifestations of COVID-19, said the review’s lead author, Igor Koralnik, MD, Northwestern Medicine chief of neuroinfectious diseases and global neurology and a professor of neurology at Northwestern University Feinberg School of Medicine.