

## Stroke - An Emergent Complication of Covid-19 Disease

**Dr Ch OV Nagateja and Dr Hari Chandana**

*Doctor of Pharmacy, Clinical Pharmacist, Clinical Researcher, Clinical Data Analyst, India*

**\*Corresponding Author:** Dr Ch OV Nagateja Doctor of Pharmacy, Clinical Pharmacist, Clinical Researcher, Clinical Data Analyst, India.

**Received:** March 24, 2022

**Published:** May 01, 2022

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Coronavirus disease 2019 (COVID-19) is a viral infection caused by Severe acute respiratory illness (SARS-CoV-2). Wuhan, China, was the first country to report it. The appearance and spread of the extremely contagious new coronavirus disease (COVID-19) has sparked the century's greatest public health issue.

Despite the fact that COVID-19 is largely a respiratory infection, research indicate that it can cause hypercoagulability and thrombotic consequences. During the COVID-19 epidemic, stroke remained a medical emergency.

Patients with coronavirus disease 2019 (COVID-19) may experience a stroke, although risk factors, in-hospital events, and outcomes have not been adequately investigated in large cohorts.

The following are the most common stroke signs and symptoms, which all appear suddenly: a) numbness or weakness in one side of the body, especially the face, arm, or leg. b) confusion, difficulty speaking. c) trouble seeing from one or both eyes, dizziness, loss of coordination or posture. d) Headache (severe) Post-mortem histology of all organs studied in SARS-CoV-2 patients revealed macrovascular and microvascular clots in the arterioles, capillaries, and venules, which consists of fibrin, platelets, red blood cells, and leukocytes, which indicates that SARS-CoV-2 causes a disease in the blood vessels rather than just infecting the airway.

Multiple mechanisms have been proposed to elaborate the relation of stroke and covid-19.

These mechanisms appear to be responsible for the occurrence of strokes in COVID-19. Hypercoagulable states, vasculitis, and cardiomyopathy are responsible for occurrence of ischemic

strokes. Although the cause of haemorrhagic strokes in COVID-19 patients is unknown, it is possible that the Covid 19 virus -affinity for ACE2 receptors, which are expressed in brain endothelial and arterial smooth muscle, allows the virus to damage intracranial arteries, leads to vessel wall rupture.

Raised D-dimer levels in patients with covid-19 experiencing acute ischemic stroke, implying that the coagulation cascade and innate immune systems were activated, which appears to be a unifying factor in the currently known studies.

Another thing to consider is the role of a cytokine storm, which causes raised levels of IL-6 and C-reactive protein, which have both been associated to an increased risk of stroke and myocardial infarction in healthy people.

Despite a lack of data to support an optimum medical treatment regimen for patients presenting with stroke or to avoid stroke among hospitalised COVID-19 patients, therapy strategies for stroke prevention have remained largely unchanged from pre-COVID periods. As research continues, experts are learning more about which people with COVID-19 are more likely to have a stroke.

Stroke teams should be aware that COVID-19 patients can have cerebrovascular accidents and should provide appropriate personal protective equipment to any suspected patient. More research is desperately needed to improve current understandings of COVID-19 infection-related neurological disease.

Further research into the phenomenon of stroke as a complication of COVID-19 would also aid in the comprehensive decipherment of the pathophysiology and prognosis of stroke in COVID-19, improving care effectiveness [1-5].

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