COVID-19 positive patients at higher risk of developing neurodegenerative disorders, new study shows

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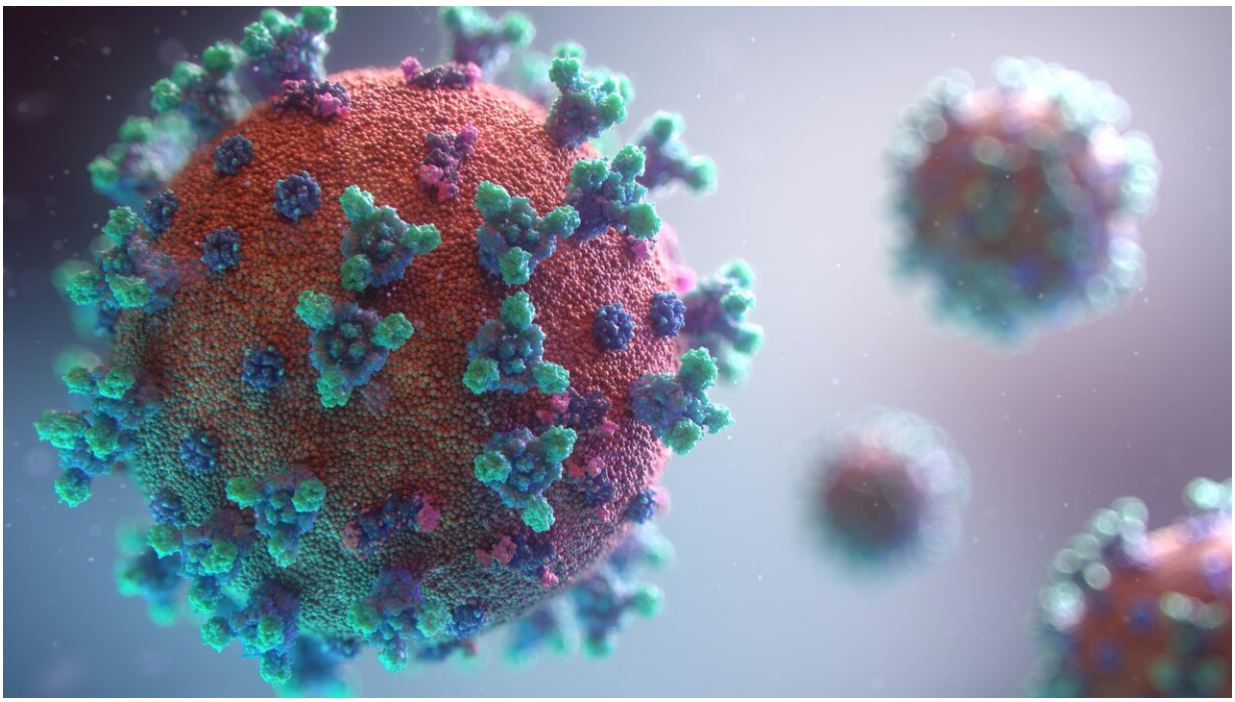

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COVID-19 positive outpatients are at an increased risk of neurodegenerative disorders compared with individuals who tested negative for the virus, a new study presented today at the 8th European Academy of Neurology (EAN) Congress has shown.

The study, which analyzed the health records of over half of the Danish population, found that those who had tested positive for COVID-19 were at an increased risk of Alzheimer's disease, Parkinson's disease, and ischemic stroke.

Out of the 919,731 individuals that tested for COVID-19 within the study, researchers found that the 43,375 people who tested positive had a 3.5 times increased risk of being diagnosed with Alzheimer's disease, 2.6 times with Parkinson's disease, 2.7 times with ischemic stroke and a 4.8 times increased with intracerebral hemorrhage (bleeding in the brain). While neuroinflammation may contribute to an accelerated development of neurodegenerative disorders, the authors also highlighted implications of the scientific focus on long-term sequelae after COVID-19.

The study analyzed in- and outpatients in Denmark between February 2020 and November 2021, as well as influenza patients from the corresponding pre-pandemic period. Researchers used statistical techniques to calculate relative risk, and results were stratified for hospitalization status, age, sex, and comorbidities.

Dr. Pardis Zarifkar, lead author from the Department of Neurology, Rigshospitalet, Copenhagen, Denmark, explained, "More than two years after the onset of the COVID-19 pandemic, the precise nature and evolution of the effects of COVID-19 on neurological disorders remained uncharacterized. Previous studies have established an association with neurological syndromes, but until now it is unknown whether COVID-19 also influences the incidence of specific neurological diseases and whether it differs from other respiratory infections."

The increased risk of most neurological diseases was, however, no higher in COVID-19 positive patients than in people who had been diagnosed with influenza or other respiratory illnesses. COVID-19

patients did have a 1.7 times increased risk of ischaemic stroke in comparison to influenza and bacterial pneumonia inpatients over 80 years of age.

The frequency of other neurodegenerative illnesses such as multiple sclerosis, myasthenia gravis, Guillain-Barré syndrome and narcolepsy did not increase after COVID-19, influenza, or pneumonia.

Dr. Pardis Zarifkar added, "We found support for an increased risk of being diagnosed with neurodegenerative and cerebrovascular disorders in COVID-19 positive compared to COVID-negative patients, which must be confirmed or refuted by large registry studies in the near future. Reassuringly, apart [from] ischemic stroke, most neurological disorders do not appear to be more frequent after COVID-19 than after influenza or community-acquired bacterial pneumonia."

"These findings will help to inform our understanding of the long-term effect of COVID-19 on the body and the role that infections play in neurodegenerative diseases and stroke."

More information: Frequency of neurological diseases after COVID-19, influenza A/B and bacterial pneumonia, presented at the EAN Congress 2022.

Provided by The European Academy of Neurology