

COVID-19 increases stroke risk in younger patients and results in poorer outcomes, study shows

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Stroke patients with COVID-19 are facing worse outcomes and are often

younger and healthier, according to research presented today at the Society of NeuroInterventional Surgery's (SNIS) 19th Annual Meeting. People with COVID-19 are more than 2.5 times more likely to have an unfavorable outcome and face a difficult recovery post-stroke.

The study, "Characteristics of a COVID-19 Cohort with Large Vessel Occlusion: A Multicenter International Study," reviewed data for 575 patients with acute large vessel occlusion (LVO)—194 who had COVID-19 and 381 who did not. These patients spanned nearly 50 [thrombectomy](#) comprehensive stroke centers across Europe and North America. The control group was composed of patients who presented with LVO and received a mechanical thrombectomy between January 2018 and December 2020. Thrombectomy is a minimally invasive procedure that uses a catheter to reopen blocked arteries in the brain.

In the study, authors compared which patients had successful revascularizations—a procedure aimed to restore blood flow into blocked arteries or veins—and left the hospital with little to no disabilities. Of the individuals with COVID-19, the severity of the virus on stroke onset was moderate in 75.5% of the cases, severe in 15.8% and critical in 8.7%. The mean duration between symptoms and stroke onset was about nine days, and 34% of the COVID-19 group had a stroke as their first symptom of the disease.

Researchers found that the patients with COVID-19 (who were younger and had fewer risk factors) were less likely to achieve successful revascularization. In addition, the thrombectomy was prolonged in the COVID-19 group, as was the length of hospital stay. Most alarming, mortality rates were higher by more than twofold in the COVID-19 group compared to the control. Overall, COVID-19 was a predictor of poorer outcomes, even though many of the patients were younger, healthier and even had [mild symptoms](#) of the virus before the onset of [stroke](#).

"There is still so much we need to learn about COVID-19, especially its impact on younger patients," said Pascal Jabbour, MD, lead author of the study, professor of neurological surgery and the chief of the division of neurovascular and endovascular neurosurgery at Thomas Jefferson University. "Stroke's impact on individuals with COVID-19 is alarming and one we must continue to research and remedy."

More information: Pascal Jabbour et al, Characteristics of a COVID-19 Cohort With Large Vessel Occlusion: A Multicenter International Study, *Neurosurgery* (2022). [DOI: 10.1227/neu.0000000000001902](https://doi.org/10.1227/neu.0000000000001902)

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