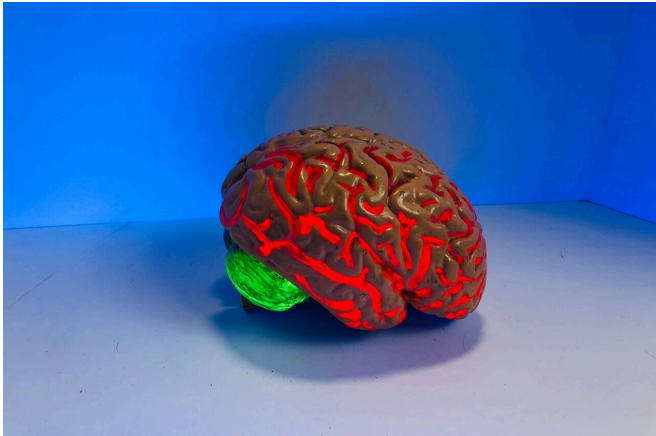


COVID-19 diagnosis linked to more bleeding, worse outcomes in stroke treatments

10 November 2022



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People with a COVID-19 infection who have an ischemic stroke may be more likely to have bleeding in their brain and worse outcomes during stroke treatments to restore blood flow than people without COVID-19, according to a new study published in the November 9, 2022, online issue of *Neurology*, the medical journal of the American Academy of Neurology. An ischemic stroke is caused by a blockage of blood flow to the brain and is the most common type of stroke.

"While we know that COVID-19 may affect a person's health in many ways, not much is known about the safety and effectiveness of treatments to restore [blood](#) flow for those who have had an ischemic [stroke](#)," said study author João Pedro Marto, MD, of Hospital Egas Moniz in Lisbon, Portugal. "Our study found that people who had an ischemic stroke and COVID-19 had higher rates of brain bleeding and were more likely to have worse outcomes, including death, than those without COVID-19."

The study involved 15,128 people with an average age of 72 from 30 countries across five continents who had an ischemic stroke. All had treatments to restore blood flow. Of the total, 5,848 people, or 39%, received intravenous thrombolysis treatments, which are injections of clot-busting drugs, only. The other 9,280 people, or 61%, received endovascular treatments, which can include using a stent to remove a clot, or both methods. Of the total participants, 853, or 6%, had COVID-19.

Researchers looked at how often people had two types of complications: [intracerebral hemorrhage](#), which is a type of bleeding within the brain; and [subarachnoid hemorrhage](#), which is bleeding between the brain and the membrane that covers it.

When comparing people with COVID-19 to those without, 9% had intracerebral hemorrhage compared to 5%, 4% had subarachnoid hemorrhage compared to 2%, and 10% had both complications compared to 6%.

After adjusting for factors such as age, sex and [blood glucose levels](#), researchers found that people with COVID-19 had a 53% higher risk of intracerebral hemorrhage compared to people without COVID-19. Those who had COVID-19 also had an 80% higher risk of subarachnoid hemorrhage compared to those without COVID-19. When looking at both complications combined, people with COVID-19 had a 56% higher risk compared with people without COVID-19.

Researchers also found that those with COVID-19 were more than twice as likely to die within 24 hours after stroke treatment compared to people without COVID-19. They were also 88% more likely to die within three months.

"While our study found a higher rate of [brain](#) bleeds in people with COVID-19, the number of people who experienced complications was still small," said Marto. "We believe treatments to restore [blood flow](#) remain beneficial to people with [ischemic stroke](#) and COVID-19 and suggest they continue to be given as quickly as possible using current treatment recommendations. Our findings can be taken into consideration for treatment decisions and monitoring people after stroke."

A limitation of the study is that researchers were not able to collect data on the specific virus variants, which could have influenced the results.

More information: João Pedro Marto et al, Safety and Outcome of Revascularization Treatment in Patients With Acute Ischemic Stroke and COVID-19: The Global COVID-19 Stroke Registry, *Neurology* (2022). [DOI: 10.1212/WNL.0000000000201537](#)

Provided by American Academy of Neurology
APA citation: COVID-19 diagnosis linked to more bleeding, worse outcomes in stroke treatments (2022, November 10) retrieved 14 November 2022 from <https://medicalxpress.com/news/2022-11-covid-diagnosis-linked-worse-outcomes.html>

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