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## **Brain Damage And Hallucinations Associated With Even Mild Covid-19 Coronavirus Infection**



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*Scientists are increasingly reporting cases of brain diseases associated with Covid-19 coronavirus ... [+] Getty* 

A new study has warned that potentially deadly brain disorders may be a symptom of Covid-19, even in people with otherwise mild disease.

The research published today in the journal *Brain*, looked at 40 adult patients with Covid-19 in the U.K., finding that they showed symptoms of a wide range of serious brain diseases. Many of the patients had only mild typical Covid-19 symptoms such as fever or respiratory issues and for some, their neurological symptoms were the only sign they were sick.

One 55-year old woman with no known current or historical mental illness was admitted to hospital with recognized Covid-19 symptoms including fever, cough and muscle aches. She was discharged after two weeks, having been treated with oxygen, but four days later her husband reported she was confused and behaving strangely. She then experienced hallucinations, reporting seeing lions and monkeys in her house, and became delusional and aggressive with her family and hospital staff. She was treated with

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anti-psychotic medication and her symptoms improved over the course of three weeks, although the study does not confirm whether she made a full recovery.

Other neurological issues experienced by the Covid-19 patients, who ranged in age from 16-85, included more cases of delirium or psychosis, strokes and problems with peripheral nerves found in extremities like hands and feet.

Particularly worryingly, 9 patients were diagnosed with a form of Acute Demyelinating Encephalomyelitis (ADEM), where the immune system is thought to attack myelin, the insulating covering of nerves in the central nervous system. If myelin is absent or not thick enough, nerves lose the ability to effectively transmit information and a wide range of symptoms including paralysis and cognitive issues can result. ADEM is rare, but when it is diagnosed, it is almost always found in children after viral infections, not adults as seen in this study.

A 47-year old woman experienced a week of typical Covid-19 symptoms, but then experienced neurological problems and was diagnosed with ADEM. Her brain eventually became so swollen that surgeons had to remove part of her skull to relieve the pressure. Dr Michael Zandi, consultant neurologist from University College London Hospitals and one of the senior authors of the paper, <u>posted about the</u> <u>work on twitter</u>, saying that the next steps were "research on the causes and treatments of neurological involvement, and surveillance and epidemiology," requiring a global collaborative effort.

This is <u>not the first time</u> that <u>neurological</u> <u>symptoms have been described</u> in Covid-19 patients, but the new study provides vital new information as to the large spectrum of different brain diseases that can be caused by infection with the SARS-CoV2 coronavirus.

The U.K. has a surveillance program called <u>*CoroNerve*</u>, where physicians can report neurological symptoms of Covid-19 with the hope of better understanding the effect of the coronavirus on the brain.

In recent weeks, there have been growing concerns that the pandemic may leave some Covid-19 survivors with <u>chronic health</u> <u>conditions</u>. Although serious neurological complications are seemingly rare, the study authors warn that they may be long-lasting and require further research.

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Victoria Forster I am a postdoctoral research scientist focusing on childhood cancers and new, targeted cancer therapies. As a survivor of childhood leukemia myself, I am a determined advocate for research into better, less-toxic cancer treatments and how to reduce the long-term side effects of current drugs. I am an award-winning science communicator and have written for The Times, The Guardian and various cancer-focused outlets. I am also a 2017 TED Fellow, having done my TED talk on cancer survivorship and I regularly do public talks on topics ranging from 'Why haven't we cured cancer yet?' to 'Cannabis and cancer; hype or hope?'. I am passionate about using social media to communicate science and frequently share pictures and stories from my own laboratory work in real-time on my Twitter account @vickyyyf, alongside commentary about important research breakthroughs. You can find out more about me and how to get in contact via my website drvickyforster.com. All of my articles reflect my personal views and not those of my employer.