

Delirium could be an early marker of COVID-19

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Delirium accompanied by fever could be an early symptom of COVID-19. This is the main conclusion drawn by a scientific research review carried out by researchers from the Universitat Oberta de Catalunya (UOC) and published in *Clinical Immunology and Immunotherapy*, which highlights the fact that some patients also develop delirium in addition to more well-known symptoms.

The manifestation of this state of confusion, when accompanied by high fever, should be considered an early marker of the disease, particularly in the case of elderly patients.

"Delirium is a state of confusion in which the person feels out of touch with reality, as if they are dreaming," explained UOC researcher Javier Correa, who carried out this study at the University of Bordeaux (France). He added, "We need to be on the alert, particularly in an epidemiological situation like this, because an individual presenting certain signs of confusion may be an indication of infection."

Correa, together with UOC Cognitive NeuroLab researcher Diego Redolar Ripoll, has reviewed the body of scientific work published on the effects of COVID-19 in relation to the central nervous system, i.e. the brain. The review found that there are growing indications that the coronavirus also affects the central nervous system and produces neurocognitive alterations such as headaches and delirium, as well as psychotic episodes.

"The main hypotheses that explain how the [coronavirus](#) SARS-CoV-2 affects the brain point to three possible causes: hypoxia or neuronal oxygen deficiency, inflammation of brain tissue due to cytokine storm and the fact that the virus has the ability to cross the [blood-brain barrier](#) to directly invade the brain," said Correa. He stressed that any one of these three factors has the potential to result in delirium and explained that evidence of hypoxia-related brain damage has been observed in autopsies carried out on patients who have died from the infection and that it has been possible to isolate the virus from the cerebral tissue.

According to the researchers, delirium, cognitive deficits and behavioral anomalies are most likely to be the result of systemic inflammation of the [brain](#) and a state of hypoxia, which also causes the neuronal tissue to become inflamed in areas such as the hippocampus, which are associated

with the cognitive dysfunctions and behavioral alterations presented by patients suffering [delirium](#).

More information: undefined undefined et al. Delirium In Severe Acute Respiratory Syndrome-Coronavirus-2 Infection: A Point Of View, *Clinical Immunology and Immunotherapy* (2020). [DOI: 10.24966/CIIT-8844/1000039](#)

Provided by Universitat Oberta de Catalunya

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