ISSN: 2641-1911
DOI: 10.33552/ANN.2021.10.000746
Archives in Neurology & Neuroscience
Iris Publishers

Short Communication

Post-COVID-19 Infection and Cognitive Deficits: Permanent or Transient?

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Received Date: June 17, 2021

Published Date: July 09, 2021

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COVID-19 can be defined as an infectious disease caused by the new coronavirus (Sars-Cov2). The main signs responsible for evinced by the patients are fever, myalgia, dyspnea, and disorders of taste and smell. An array of additional disorders, characterize it as a systemic disease. Nasal congestion, memory deficits, headache, conjunctivitis, pharyngitis, diarrhea, dysautonomia and impairment of diverse organs and systems have been reported. These manifestations may be mild and sometimes asymptomatic, but can also result in death [1,2]. Varying degrees of injury may be manifest in the peripheral and central nervous systems (CNS). Two routes of entry into the CNS are already known; a hematogenous pathway mediated by ACE2 receptors, and retrograde neuronal retrograde pathways. These neuropathic mechanisms may explain the increased occurrence of stroke, behavioral changes, and anosmia [3,5]. Another effect of COVID-19 is loss of visual-perceptive ability. This reflects injury of the occipital and parietal lobes, which are responsible for executive planning, elements of visual perception, visual-constructive organization and memory. Many researchers have characterized these cognitive deficits and recent memory loss as a kind of immune-mediated encephalitis [6,7]. Survivors of COVID-19 should be periodically assessed with cognitive and neuropsychiatric tests, and offered cognitive and behavioral rehabilitation programs if necessary. Sars-Cov2 seems to present tropism for the hippocampus, increasing the likelihood of damage making them vulnerable, increasing the probability of monthly damage and, in some cases, accelerating the natural history of neurodegenerative conditions such as Alzheimer's disease [8,9]. In an observational series of 58 patients with COVID19, 33% had dysexecutive syndrome, characterized by inattention and disorientation, with findings of frontotemporal hypoperfusion on magnetic resonance imaging of the brain [10]. At this point in time, new clinical and ancillary test findings present us with an envolving view of the natural history of this disease. Therefore, now It is not possible to list the chronic sequelae that will be faced by COVID-19 survivors. The long-term consequences of this "brain-infection" remain unknown, but they may be associated with disabilities in

cognitive (memory), executive process, affective, and behavioral domains [11]. Each of these domains can influence an patient's quality of life, autonomy and relationship. Time will tell?

Acknowledgement

None.

Conflict of Interest

No conflict of interest.

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