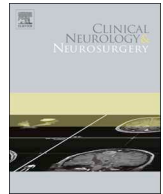




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COVID 19 and brain crosstalks

We read with interest the article by Montalvan et al., [1] where the authors have very precisely discussed neuroinvasion by the corona virus disease (COVID 19) and several neurological conditions. We feel it is very important, that neurologic patients be monitored, for early detection of any neurologic sequelae in patients of COVID 19. In a short span of time, we have come a long way in our understanding about COVID 19 and its neuroinvasive potentials. Today, we are aware of crosstalks between injured brain and other systems in the body, especially heart and lungs and vice versa. Multisystem involvement of COVID 19 does raise the possibility of this phenomenon, what we consider as a 'Crosstalk'. This article raises few pertinent questions—

- 1 Does neuroinvasion by COVID 19 result in cardiac manifestations or is it the direct involvement of the virus with cardiovascular system?
- 2 Is neuroinvasion responsible for poor outcome in patients with respiratory system and cardiovascular system involvement?
- 3 Do patients with neurologic, cardiac and respiratory problems make them susceptible to COVID 19?

The exact mechanism of neuroinvasion has not been identified but the involvement of the neuroanatomic pathways resulting in dysfunction of cardio-respiratory centers in brain stem have been implicated as the potential cause of cardiac and respiratory events in patients of COVID 19 [2]. With the interaction of the vital centers in the brainstem, one can speculate their role in systemic sequelae of patients with COVID 19, but whether the reverse holds true, is yet to be understood.

An evidence based answer to the above questions could possibly help in focusing our management strategies in patients with COVID 19.

As the data is limited and research related to COVID 19 still in progress, triage of patients with coexisting neurologic, cardiac and respiratory problems may provide some solution, as special considerations may be provided to them. It could also help prevent adverse outcomes in this population, by early detection and timely intervention.

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