Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Clinical Neurology and Neurosurgery 196 (2020) 106021

Contents lists available at ScienceDirect

Clinical Neurology and Neurosurgery

journal homepage: www.elsevier.com/locate/clineuro

Should we mind for late neurologic manifestations from novel coronavirus?

We read with great interest the article published by Montalvan et al. [1] reviewing the neurological manifestations of COVID-19 and other coronavirus infections. The review was focused on the acute complications described in humans and in animal models of coronavirus infection. So far, no cases of chronic neurological illness or late onset neurological disease associated with the novel coronavirus (2019-nCoV), the cause of Coronavirus disease 2019 (COVID-19), have been published. However, from murine models it is known that even in asymptomatics, the coronavirus may persist chronically in anterior spinal cord causing late onset neurological disease manifesting as limb paresis [2]. Genetic factors and host's antiviral response may account for late onset neurological disease development [3]. Importantly, even in the absence of detectable active replication, murine Coronavirus can mutate and persist chronically in the central nervous system causing chronic demyelination [4].

These findings from animal models are relevant for different reasons. Contrary to previous Coronavirus outbreaks that were limited to Asian countries, the genetic pool of infected humans is diverse and worldwide representative. In addition, genetic diversity and rapid evolution is a recognizable feature of 2019-nCoV [5]. Hence, the possibility of late neurological disease associated with 2019-nCoV infection as a result of the multiplicity of viral/host genetic-immune interactions should be considered.

Considering that the majority of 2019-nCoV infections are asymptomatic, and the fact that murine asymptomatics develop late neurological disease, theoretical or speculative anticipation of human increase of late neurological diseases is reasonable. Continuing surveillance and awareness of the possibility of late neurological complications even in patients without precedent diagnosis of 2019-nCoV infection is warrant.

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https://doi.org/10.1016/j.clineuro.2020.106021
Received 10 June 2020
Available online 15 June 2020