

Possible acute multifocal demyelinating lesions in a COVID-19 patient

Possíveis lesões desmielinizantes multifocais agudas em um paciente com COVID-19

Agábio Diógenes PESSOA NETO¹, Manoella do Monte ALVES², Paulo Santiago de Moraes BRITO¹, Manuel MOREIRA NETO³, Rodrigo Alencar e SILVA¹, Mario Emilio TEIXEIRA DOURADO¹, Clécio de Oliveira GODEIRO JUNIOR¹

A 49-year-old man was admitted with cough, dyspnea, and fever. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) polymerase chain reaction (PCR) from nasopharyngeal swab was positive. Due to severe acute respiratory syndrome, he was intubated. On day 19, sedatives were held. On neurological examination, he was lethargic, with asymmetric quadriplegia (left>right) and global hyporeflexia. Brain magnetic resonance

imaging revealed multifocal brain lesions (Figures 1A, 1B and 1C). He was treated with high-dose steroids and showed clinical and radiological improvement (Figure 1D).

This case highlights that possible acute disseminated encephalitis should be considered a potentially treatable cause of encephalopathy or multiple neurological deficits in COVID-19 patients^{1,2}.

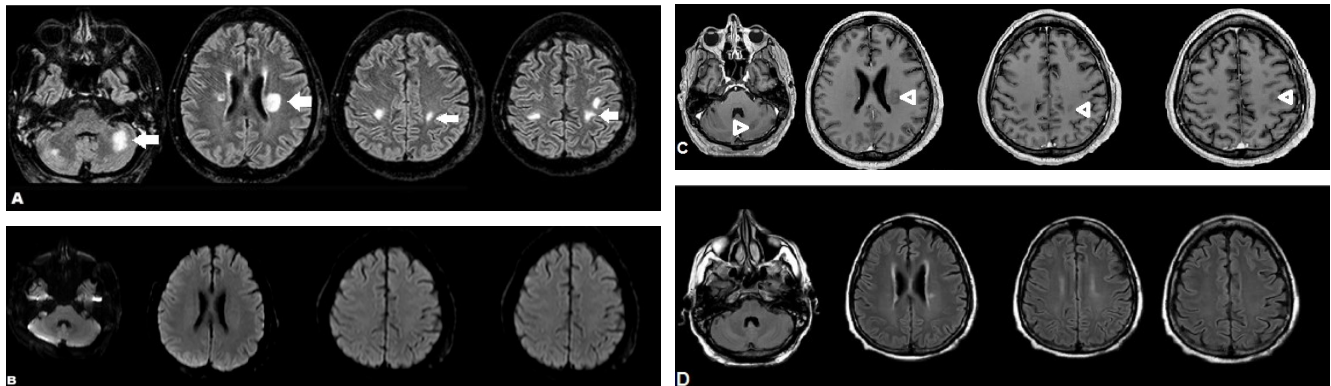


Figure 1. (A) Axial images in the FLAIR T2W showing multiple lesions with T2 hypersignal in the cerebral and cerebellar white matter (arrows), with no mass effect. (B) Axial diffusion (DWI) — Absence of restriction on diffusion in the topography of the lesions and (C) axial T1 post-contrast (Gd) show no enhancement (arrowhead). (D) Control examination after corticosteroid therapy showing marked involution of brain lesions and disappearance of cerebellar lesions in the axial FLAIR T2W images.








References

- Parsons T, Banks S, Bae C, Gelber J, Alahmadi H, Tichauer M. COVID-19-associated acute disseminated encephalomyelitis (ADEM). *J Neurol*. 2020 May;1-4. <https://doi.org/10.1007/s00415-020-09951-9>
- Zoghi A, Ramezani M, Roozbeh M, Darazam IA, Sahraian MA. A case of possible atypical demyelinating event of the central nervous system following COVID-19. *Mult Scler Relat Disord*. 2020 Sep;44:102324. <https://doi.org/10.1016/j.msard.2020.102324>

¹Hospital Universitário Onofre Lopes, Department of Neurology, Natal RN, Brazil

²Hospital Giselda Trigueiro, Department of Infectious Diseases, Natal RN, Brazil.

³Hospital Universitário Onofre Lopes, Department of Radiology, Natal RN, Brazil

Agábio Diógenes PESSOA NETO  <https://orcid.org/0000-0003-2937-5298>; Manoella do Monte ALVES  <https://orcid.org/0000-0003-2485-3502>; Paulo Santiago de Moraes BRITO  <https://orcid.org/0000-0002-0010-7217>; Manuel MOREIRA NETO  <https://orcid.org/0000-0002-3478-5323>; Rodrigo Alencar e SILVA  <https://orcid.org/0000-0002-3311-0164>; Mario Emilio TEIXEIRA DOURADO  <https://orcid.org/0000-0002-9462-2294>; Clécio de Oliveira GODEIRO JUNIOR  <https://orcid.org/0000-0002-4312-1633>

Correspondence: Agábio Diógenes Pessoa Neto; E-mail: agabio.medbio@gmail.com

Conflict of interest: There is no conflict of interest to declare.

Authors' contributions: These authors contributed equally to the manuscript.

Received on August 13, 2020; Received in its final form on August 25, 2020; Accepted on August 27, 2020.