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BILATERAL TROCHLEAR PALSY DUE TO CEREBRAL VASCULITIS RELATED TO COVID-19 INFECTION

Cabeçalho: Oliveira RMC et al. Cerebral Vasculitis related to COVID-19 Infection.

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A 69-year-old caucasian man presented fever (38°C) with abdominal pain, left posterior chest pain without cough or dyspnea and mild occipital headache that remained in the next few days. Eleven days later, he woke up with binocular diplopia and a severe stabbing occipital headache. There were no peripheral signs of systemic vasculitis. Neurologic evaluation identified bilateral paresis of the IV cranial nerves. He had well-controlled arterial hypertension and denied trauma or use of other medications. COVID-19 infection was confirmed by the reverse transcription

technique followed by polymerase chain reaction (RT-PCR) in a nasopharyngeal swab. A magnetic resonance imaging (MRI) of the brain with MRI angiography and vessel wall study showed signs of vasculitis of the vertebrobasilar system¹, as well inflammatory radiologic signs in periaqueductal region, along with the topography of the trochlear nuclei (FIG.1). Chest computed tomography (CT) showed peripheral ground-glass parenchymal opacities, suggesting viral pneumonia. Cerebrospinal Fluid (CSF) revealed 2 cells/mm³ (69% lymphocytes, 29% monocytes, 2% macrophages) and proteins slightly increased from 46 mg/dl (with 17,01% of gamma globulin). CSF antibody tests were negative for syphilis and other viruses. Rheumatological causes, hypovitaminosis and thyroid dysfunction were ruled out. Erythrocyte sedimentation rate (ESR) was 33 mm/h. He received IV methylprednisolone for 5 days with complete improvement of pain and diplopia. This case is the first report of cerebral vasculitis related to COVID-19 infection in an adult patient. We emphasize that headache² could be an alarm signal of cerebral vasculitis in these patients.

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Figure 1: A and B, axial MRI images 3D-T1 FATSAT post contrast vessel wall imaging, on the level of the vertebral arteries (A) and basilar artery (B) shows subtle abnormal concentric enhancement of the basilar artery wall (arrow) and intense abnormal concentric enhancement of the vertebral arteries wall, that are tortuous and lateralized to the left (arrow). C, Reformated Coronal Oblique 3D-T1 FATSAT post contrast vessel wall imaging shows abnormal concentric enhancement of the basilar and vertebral arteries walls (arrows).



