Natalizumab

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Progressive multifocal leukoencephalopathy: case report

A 50-year-old man developed progressive multifocal leucoencephalopathy (PML) during treatment with natalizumab for multiple sclerosis (MS).

The man, who was diagnosed with MS, had been receiving treatment with natalizumab [*route and dosage not stated*] since 2009. His John Cunningham virus (JCV) serology was highly positive since 2017. However, due to his personal choice, natalizumab therapy was continued. In March 2020, he had dysarthria. Subsequent brain MRI showed a right frontal lesion, mainly confined to the subcortical white matter, with relative sparing of the cortex. A cerebrospinal fluid analysis (CSF) showed 61500 /mL JCV copies. Hence, based on the investigation, natalizumab-induced PML was diagnosed [*duration of treatment to reaction onset not stated*].

The man's natalizumab was therefore discontinued. Following the discontinuation of natalizumab, his neurological symptoms improved. In April 2020, he exhibited worsening of neurological symptoms. Additionally, further examinations showed mild COVID-19 pneumonia. Brain MRI showed progression of PML lesion. After the spontaneous recovery from COVID-19, his symptoms improved with significant reduction in JCV copies. His repeat SARS-CoV-2 PCR test returned negative. Subsequently, he was discharged from the hospital. Hence, it was concluded that, his PML symptoms deteriorated due to SARS-CoV-2 infection. He started receiving interferon β-1-a for the management of MS.

Borrelli S, et al. Unexpected worsening of progressive multifocal leucoencephalopathy following COVID-19 pneumonia. Journal of NeuroVirology 27: 510-513, No. 3, Jun 2021. Available from: URL: http://doi.org/10.1007/s13365-021-00980-2

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