

## **A rare case of opsoclonus myoclonus syndrome following COVID-19 illness.**

Shil, Rajish<sup>1</sup>; Seed, Adam<sup>1</sup>, Wood, Greta<sup>1</sup> Dunai, Cordelia<sup>2</sup>; Collie, Ceryce<sup>2</sup>; Pendered, Sophie<sup>2</sup>; Bonello, Michael<sup>3</sup>; Elson, Liene<sup>3</sup>; Michael, Benedict<sup>4</sup>

<sup>1</sup>Health Education England, National Institute of Health and Research, <sup>1,2,4</sup>University of Liverpool, <sup>3,4</sup> The Walton Centre for Neurosurgery and Neurology, Liverpool.

### **Abstract:**

There has been growing evidence in the literature that infection with COVID-19 is associated with neurological and psychiatric complications since the beginning of the pandemic. Whilst the pathophysiology remains unclear in many cases, in some these complications could be due to the body's natural immune response to the SARS-CoV-2 virus.

We are presenting a rare and interesting case of a 53 years old, male, presenting with limb tremors and collapse, following recovery from acute COVID illness. He developed confusion and seizures, with worsening limb tremors, requiring him to be intubated and admitted to the critical care unit. His EEG demonstrated an encephalopathic picture, with no evidence of any epileptiform activities. Laboratory markers including CSF and auto-immune panels for encephalitis came back to be unremarkable. He also underwent whole-body CT and PET-CT, which ruled out any malignancies. Following a prolonged ITU admission, he has recovered gradually with conservative management and was stepped down to the ward. Further clinical observations showed evident features of opsoclonus and myoclonus, which was stimulus sensitive in keeping with a clinical presentation of opsoclonus myoclonus syndrome. The patient was given a course of IVIG and IV methylprednisolone, followed by an oral steroid taper, in addition to symptomatic treatment for myoclonus and agitation. The patient's symptoms have significantly improved with the treatment and were discharged home with a follow-up appointment in the neurology clinic. The patient was recruited into the COVID Clinical Neuroscience Study (COVID-CNS), a UK-wide multicentre study for neurological complications following COVID-19 illness and informed consent has been taken for publication and presentation purposes.

To date, very few cases of Opsoclonus myoclonus have been reported in the literature [1-4]. Early identification and management will lead to good patient outcomes in terms of morbidity and mortality.

### **References:**

1. Ismail II, Kamel WA, Kilany A. Opsoclonus myoclonus ataxia syndrome following COVID-19 infection. *Acta Neurol Belg.* 2022 Jul 14:1–2. PMID:35836090; PMCID: PMC9282143.
2. Shah PB, Desai DS. Opsoclonus myoclonus ataxia syndrome in the setting of COVID-19 infection. *Neurology.* (2021) 96:33.
3. Kini, Tonse A. MBBS; Guduru, Zain MD. Opsoclonus–Myoclonus in COVID-19 Infection. A Known Clinical Presentation in New Disease. *Journal of Neuro-Ophthalmology* 42(2):p e526, June 2022.
4. Chacko J, Maramattom BV. Para-infectious opsoclonus myoclonus syndrome with COVID-19. *Ann Indian Acad Neurol* 2022;25:546-8