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LETTER TO THE EDITORS

Miller–Fisher-like syndrome related to SARS-CoV-2 infection (COVID 19)

Jessica Fernández-Domínguez[1] · Elena Ameijide-Sanluis[1] · Carmen García-Cabo[1] · Raquel García-Rodríguez[1] · Valentín Mateos[1]

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Dear Sirs,

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic shows that novel coronavirus mainly impairs respiratory system, but day by day, new non-respiratory symptoms are reported, neurological symptoms included. We present the case of a patient admitted to our hospital for impaired gait after SARS-Cov2 infection.

A 74-year-old women, with prior history of hypertension and follicular lymphoma treated from 2014 to 2015, was admitted to our province's reference hospital in March, for bilateral pneumonia due to coronavirus infection confirmed by swab SARs-CoV2 test. Respiratory symptoms started 10 days before admission. She received hydroxychloroquine and lopinavir/ritonavir, the latter shortly due to gastric intolerance, being discharged 9 days after admission, with two negative swab SARS-CoV-2 tests. Five days after her discharge, she came to our hospital complaining of progressive gait impairment. The interval between first signs of SARS-CoV-2 symptoms and the neurological symptoms was about 12–15 days.

Neurological examination showed neither oculomotor nor pupillary reflex impairment, highlighting a lower limbs areflexia with patent gait ataxia, without strength and any sensitivity impairment. Faced with suspicion of neurological pathology related to SARS-CoV-2 prior infection, cranial MRI was performed which showed non-pathological alterations. An electromyography showing slight F-wave delay in upper limbs was done. Ordinary laboratory results showed normality in blood white cell account. Cerebrospinal fluid (CSF) analysis showed an increased protein level (110 mg/dl, normal 15–45 mg/dl) with less than 5 white cells, 100% lymphocytes. With Guillain– Barré syndrome-like suspicion, she was admitted for intravenous immunoglobulins treatment. She also complained about blurred vision, being assessed by ophthalmology without noticeable alterations, and performing visual-evoked potentials, without findings. She received 20 g of immunoglobulins daily, during 5 days. Antiganglioside antibodies, including anti GD1b, were negative. CSF SARS-CoV-2 PCR was also negative. The day 6, she was discharged. A new neurological exploration was done the 12th day after her first visit to clinics. An improvement in gait was observed, and also, lower limb reflexes were slightly present. A new EMG was done, but it remained unchanged.

Guillain–Barré syndrome related to SARS-CoV2 has being reported in at least five cases [1, 2]. Also, Guillain–Barré syndrome related to others coronavirus has been reported [3]. Instead of a proper Guillain–Barré syndrome, we considered our patient a Miller–Fisher-like syndrome, due to her marked ataxia and lower limbs areflexia, probably an acute ataxic neuropathy. Even though no ophthalmoparesis was observed, we consider that the neurological symptoms overlapped with the respiratory symptoms; so, maybe they were unattended in her prior admission. The interval of 12–15 days between time of first respiratory symptoms and time of neurological symptoms onset is similar to other Miller–Fisher and other Guillain–Barré syndromes associated with other viral infections [4].

Even though Guillain–Barré syndrome has been previously reported associated with SARS-CoV-2 infection, and recently, another case of Miller–Fisher related with SARS-CoV-2 infection was reported [5], it seems to be an uncommon complication. Though we have done 2 EMG separated in time, we could not demonstrate peripheral demyelination nor axonal damage. Also, we did not find GD1-b antibodies. But the response to immunoglobulins was typical as it is observed in other Miller–Fisher syndromes. Future reports should clarify this observational relationship.

✉ Jessica Fernández-Domínguez
jessferdom@gmail.com

[1] Centro Médico de Asturias, Oviedo, Spain

Compliance with ethical standards

Conflicts of interest The authors declare that they have no competing interests.

Ethical standard statement The author hereby declares that the case report documented in the submitted manuscript has been carried out in acordance to the ethical standards.

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