

tual Campus of the Universidad Complutense de Madrid. These measures are similar to those implemented in other centres, even under different healthcare systems.^{1,2}

In early April, we began to assess how neurological care can return to a situation of normalcy. This transition will probably have to be progressive and include teleconsultations (we are implementing a secure videoconferencing system to improve interaction with patients) as well as conventional in-person consultations. It will be necessary to reintroduce the suspended treatments, avoiding overcrowding of patients and ensuring proper protection, and to return to normal hospitalisation procedures.

We also face the challenge of identifying, understanding, and treating the increasingly frequent neurological manifestations of COVID-19, and minimising the impact of the pandemic on patients with neurological diseases.

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References

1. Waldman G, Mayeux R, Claassen J, Agarwal S, Willey J, Anderson E, et al. Preparing a Neurology Department for SARS-

CoV-2 (COVID-19): early experiences at Columbia University Irving Medical Center and the New York Presbyterian Hospital in New York City. *Neurology*. 2020, <http://dx.doi.org/10.1212/WNL.0000000000009519>.

2. Matías-Guiu J, Porta-Etessam J, Lopez-Valdes E, Garcia-Morales I, Guerrero-Solá A, Matias-Guiu JA. La gestión de la asistencia neurológica en tiempos de la pandemia de COVID-19. *Neurología*. 2020, <http://dx.doi.org/10.1016/j.nrl.2020.04.001>.

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Guillain-Barré syndrome associated with SARS-CoV-2 infection[☆]



Síndrome de Guillain-Barré asociado a infección por SARS-CoV-2

Dear Editor:

COVID-19 is an infectious disease caused by a novel coronavirus, SARS-CoV-2. The virus was first detected in Wuhan, China, in December 2019, and subsequently spread across the world.¹ There is extensive evidence that SARS-CoV-2 infection causes respiratory alterations; however, the associated neurological manifestations are less well-known.² We present a case of Guillain-Barré syndrome (GBS) associated with COVID-19.

Our patient is a 43-year-old man who consulted due to symmetrical weakness involving all 4 limbs; weakness progressively increased in severity, leading to inability to walk. He also presented sensory alterations in distal regions of all 4 limbs. Ten days previously he had experienced a self-limited episode of diarrhoea, followed by symptoms of upper respiratory tract infection.

The neurological examination revealed weakness in all 4 limbs, with 3/5 muscle strength proximally and 4/5 distally, and global areflexia. Chest radiography revealed alterations suggestive of incipient pneumonia secondary to COVID-19 (Fig. 1). The PCR test for SARS-CoV-2 returned positive results. An EMG/nerve conduction study revealed increased distal motor latency and decreased sensory nerve conduc-



Figure 1 Chest radiography (posteroanterior view) revealing ground-glass opacity in the right middle lobe; in the current epidemiological situation, these findings suggest incipient pneumonia secondary to SARS-CoV-2 infection.

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tion velocity in the nerves evaluated, and increased minimal F-wave latency in the right L5 and S1 spinal nerve roots; these findings are suggestive of demyelinating polyradiculoneuropathy and compatible with a diagnosis of GBS.

During hospitalisation, the patient was assessed by the pulmonology and neurology departments. He received intravenous immunoglobulins for 5 days plus protocolised treatment for COVID-19: hydroxychloroquine sulfate, antiretroviral drugs (lopinavir and ritonavir), antibiotics (amoxicillin), corticosteroids, and low-flow oxygen therapy. Motor function worsened within 2 days of admission, with the patient developing bilateral facial palsy and dysphagia. Subsequently, neurological and respiratory symptoms progressed favourably.

Although SARS-CoV-2 infection is likely to have caused GBS in our patient, we should not rule out the possibility that co-presence of GBS and SARS-CoV-2 infection may be coincidental. The association between COVID-19 and GBS has not been established, although recent evidence suggest that the virus may be involved in the aetiopathogenesis of GBS.³ Future studies should address the neurological manifestations of SARS-CoV-2 infection.

References

1. Lai CC, Shih TP, Ko WC, Tang HJ, Hsueh PR. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coron-

avirus disease-2019 (COVID-19): the epidemic and the challenges. *Int J Antimicrob Agents*. 2020;55:105924, <http://dx.doi.org/10.1016/j.ijantimicag.2020.105924>.

2. Matías-Guiu J, Gomez-Pinedo U, Montero-Escribano P, Gomez-Iglesias P, Porta-Etessam J, Matías-Guiu JA. ¿Es esperable que haya cuadros neurológicos por la pandemia por SARS-CoV-2? *Neurología*. 2020;35:170–5, <http://dx.doi.org/10.1016/j.nrl.2020.03.002>.
3. Zhao H, Shen D, Zhou H, Liu J, Chen S. Guillain-Barré syndrome associated with SARS-CoV-2 infection: causality or coincidence? *Lancet Neurol*. 2020;19:383–4, [http://dx.doi.org/10.1016/S1474-4422\(20\)30109-5](http://dx.doi.org/10.1016/S1474-4422(20)30109-5).

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Neurology during the pandemic. Is COVID-19 changing the organisation of neurology departments? ☆



Neurología ante la pandemia. ¿Está el COVID-19 cambiando la organización de los servicios de neurología?

Dear Editor:

Since late 2019, and especially during 2020, multiple cases of COVID-19 have been detected in the Chinese city of Wuhan^{1,2}; the disease has become a pandemic particularly affecting China, Southern Europe, and the USA, with very few places in the world escaping its impact.

Spain is one of the countries hardest hit by the COVID-19 pandemic, although geographical differences can be observed. As of 16 April 2020, there are 182 816 confirmed cases, 19 130 deaths, and 74 797 recovered cases, and a slight downward trend has been observed in mortality, use of emergency departments, and intensive care unit admission.

The true scale of the pandemic is yet to be determined due to a lack of data on the virus' global impact on the general population.

This situation has led to the declaration of the state of alarm in Spain,³ with the Ministry of Health being granted a predominant role and healthcare responsibilities remaining within the scope of regional governments,⁴ which have had to adapt healthcare services to the pandemic and probably reduce the level of care provision for the more specific pathologies of each specialty.

Current data suggest that SARS-CoV-2 is highly contagious. Among the clinical manifestations of COVID-19 (there appear to be a large number of asymptomatic/oligosymptomatic patients),⁵ the main symptoms include fever, non-productive cough, dyspnoea, pulmonary infiltrates, and lymphocytopenia. The disease particularly affects elderly and immunosuppressed individuals.

The most frequent neurological manifestations include anosmia and dysgeusia, as well as myalgia, fatigue, and headache; only limited data are available on central and peripheral nervous system involvement. Anecdotal reports of these types of symptoms are beginning to appear, and databases are being generated, as we lack data from researchers with more experience, such as Chinese professionals. According to Dr Robert Stevens, "we know almost nothing about the potential interactions between COVID-19 and the nervous system."

Despite the increasing number of anecdotal cases and observational data on neurological symptoms, most COVID-19 patients do not present these symptoms, and while neurological alterations are infrequent, they remain a pos-

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