

of the daily actions of researchers. With increasing awareness of poorly replicable and generalisable research, academic journals must decide their priorities. Is the emphasis going to shift towards openness and transparency? Or will the publication of neurological research remain largely the same? For the sake of patients, caregivers, clinicians, researchers, and public trust, I hope journals choose the promotion of transparency.

I declare no competing interests.

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- 1 Open Science Collaboration. Psychology. Estimating the reproducibility of psychological science. *Science* 2015; **349**: aac4716.
- 2 The Lancet Neurology. Publication records versus scientific progress. *Lancet Neurol* 2020; **19**: 101.
- 3 New measure rates quality of research journals' policies to promote transparency and reproducibility. Center for Open Science, Feb 10, 2020. <https://cos.io/about/news/new-measure-rates-quality-research-journals-policies-promote-transparency-and-reproducibility/> (accessed Feb 13, 2020).
- 4 Nosek BA, Alter G, Banks GC, et al. Scientific standards. Promoting an open research culture. *Science* 2015; **348**: 1422–25.
- 5 Tell it like it is. *Nat Hum Behav* 2020; **4**: 1.

An Italian programme for COVID-19 infection in multiple sclerosis

Italy was the first European country to encounter the effects of the coronavirus disease 2019 (COVID-19) pandemic.¹ For people with multiple sclerosis, the situation carries additional reasons for concern. Although emerging work suggests that some coexisting diseases, such as hypertension, might increase the severity of the COVID-19 infection, how less common conditions, such as multiple sclerosis, effect COVID-19 outcomes is still uncertain. Furthermore, immunosuppressive therapies, the mainstay of treatment for multiple sclerosis, might confer

additional risks or, on the contrary, confer some protection. Therefore, collecting information to evaluate the relationship between multiple sclerosis and COVID-19 and implement immediate and appropriate protective strategies is crucial. Less crucial, but equally as important, are questions about the long-term effect of this pandemic on psychiatric comorbidities, such as depression and anxiety (common comorbidities in multiple sclerosis), the patient–physician relationship, the spread of scientific information, the development of new models of care, and the role of patients and patient organisations in the community.

The Italian Multiple Sclerosis Society (AISM), the Italian Multiple Sclerosis Foundation (FISM), and the Multiple Sclerosis Study Group of the Italian Neurological Society have set up a programme to help with these crucial elements in the response to COVID-19 in patients with multiple sclerosis. The programme was developed according to suggestions received from a group of neurologists, including health-care workers on the front-line and representatives of the AISM and the FISM. Further initiatives of the programme will also consider the results of an online survey made by the AISM and the FISM aimed at understanding the most pressing needs of people with multiple sclerosis during this pandemic.

Here we report the results of the pilot phase of an investigation of COVID-19 among people with multiple sclerosis, based on a core set of data collected from treatment providers through a specifically designed web-based case report form. The core data set includes clinical and demographic characteristics, and information on disease-modifying therapies. To be included, patients had to have symptoms and signs of COVID-19 infection, with or without a positive test (RT-PCR on nasal and pharyngeal swabs).

On March 14, 2020, we sent the case report form to more than 200 Italian neurologists from about 90 multiple

sclerosis centres across Italy. As of April 7, 2020, we have collected data on 232 patients from 38 centres, 57 of whom tested positive for COVID-19 and 175 of whom had suspected COVID-19 symptoms but did not have a positive test (appendix p 1). Mean follow-up was 12.6 days (SD 7.4).

The severity of COVID-19 infection in 232 patients was classified as mild (no pneumonia or mild pneumonia) in 222 (96%), severe (shortness of breath, respiratory rates ≥ 30 breaths per min, blood oxygen saturation $\leq 93\%$, $\text{PaO}_2:\text{FiO}_2 < 300$ mmHg/%, and an increase in lung infiltrates of $> 50\%$ within 24–48 h) in four (2%), and critical (respiratory failure, septic shock, and multiple organ dysfunction or failure) in six (3%).² Of the six critical patients, one recovered and five died; all had a positive swab (appendix p 2). 21 patients had undergone a 5-day course of methylprednisolone within 3 months before the onset of COVID-19.

These results appear to be slightly reassuring and do not seem to contradict guidelines that we and others had already issued on the management of multiple sclerosis treatments in the time of the COVID-19 pandemic.³ These data must be considered only preliminary, however, and there is not enough information to speculate about any susceptibility to protection from COVID-19 afforded by disease-modifying therapies. The same is true for the effect of comorbidities, sex, and other medications (beyond just the disease-modifying therapies) that patients with multiple sclerosis might be taking.

We will continue to monitor these patients throughout the duration of the pandemic. When a system to record all patients with multiple sclerosis positive for COVID-19 is implemented, more data on the prevalence of these cases can be gathered.

Our web-based platform for data collection is available to all colleagues interested in collecting this type of data. Through procedures that are currently being defined, we also aim

See Online for appendix

For more on the programme see https://www.aism.it/international_musc_19_platform_multiple_sclerosis_and_covid_19



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For more on our case report form see <https://musc-19.dibris.unige.it/>

to make the raw consolidated data from this web-based case report form open access.

MPS reports personal fees from Biogen, Merck, Teva, Novartis, Sanofi Genzyme, Roche, GeNeuro, and Medday, outside the submitted work. The Italian Study Group on COVID-19 infection in multiple sclerosis thanks Roche for donating the web-based platform for data collection. The study was approved by the Regional Ethics Committee of Liguria (n 130/2020 – DB id 10433). There is no prominent authorship and MPS is acting as the corresponding author on behalf of the Italian Study Group on COVID-19 infection in multiple sclerosis.

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- Li C, Romagnani P, von Brunn A, Hans-Joachim A. SARS-CoV-2 and Europe: timing of containment measures for outbreak control. *Infection* 2020; published online April 9. DOI:10.1007/s15010-020-01420-9.
- Chinese Center for Disease Control and Prevention. The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) in China. *Zhonghua Liu Xing Bing Xue Za Zhi* 2020; **41**: 145–51.
- Multiple Sclerosis International Federation. Global COVID-19 advice for people with MS. March, 2020. <http://www.msif.org/wp-content/uploads/2020/03/MSIF-Global-advice-on-COVID-19-for-people-with-MS.docx-1.pdf> (accessed April 23, 2020).

admission to an intensive-care unit or intubation) might be difficult.

The European Academy of Neurology (EAN) aims to gather evidence about the neurological impact of COVID-19. Encompassing 45 000 European neurologists, 47 European National Neurological Societies, and ten associate National Societies from Africa and Asia, the EAN has created a multidisciplinary task force, the EANcore COVID-19, to develop: diagnostic and treatment recommendations for patients with COVID-19 with all subgroups of neurological condition; an online Neuro COVID-19 survey on neurological complications of COVID-19 (for which more than 4200 responses have been already received as of April 30, 2020); and the EAN Neuro COVID-19 registry, which arises from a collaboration with the Italian, Spanish, and Portuguese neurological societies and aims to collect standardised information about demographics, comorbidities, general and neurological manifestations, and course and outcome of COVID-19. This registry, launched on April 29, 2020, will be offered by the EAN to all interested neurologists, neurology departments, and National Societies, together with the necessary ethical, methodological, and technical support. EAN will also provide a platform for rapid COVID-19-related literature alerts and information.

Difficult times ask for innovative and courageous solutions. Neurologists are called on to play their part. The EAN is ready to support and join international efforts to alleviate the medical consequences and also the burden associated with the COVID-19 pandemic.

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- Mao L, Lin H, Wang M, et al. Neurologic manifestation of hospitalized patients with coronavirus disease 2019 in Wuhan, China. *JAMA Neurol* 2020; published online April 10. DOI:10.1001/jamaneurol.2020.1127.
- Toscano G, Palmerini F, Ravaglia S, et al. Guillain-Barré syndrome associated with SARS-CoV-2. *N Engl J Med* 2020; published online April 17. DOI:10.1056/NEJMc2009191.
- Gutierrez-Ortiz C, Mendez A, Rodrigo-Rey S, et al. Miller-Fisher syndrome and polyneuritis cranialis in COVID-19. *Neurology* 2020; published online April 17. DOI:10.1212/WNL.0000000000009619.
- Helms J, Kremer S, Merdji H, et al. Neurologic features in severe SARS-CoV-2 infection. *N Engl J Med* 2020; published online April 15. DOI:10.1056/NEJMc2008597.
- Li YC, Bai WZ, Hashikawa T. The neuroinvasive potential of SARS-CoV2 may play a role in the respiratory failure of COVID-19 patients. *J Med Virol* 2020; published online Feb 27. DOI:10.1002/jmv.25728.

A call for a global COVID-19 Neuro Research Coalition

Reports are emerging at a rapid pace that the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) affects the nervous system in various ways. Preliminary data from Wuhan, China, suggest that neurological manifestations are present in more than 30% of patients presenting with coronavirus disease 2019 (COVID-19).¹ Neurological features range from quite diffuse neurological signs and symptoms like headache, dizziness, reduced level of consciousness, confusion, diffuse corticospinal tract signs, and paraesthesia, to more specific manifestations, such as seizures, stroke, encephalitis, or meningoencephalitis, and myopathy.^{1,2} To date, SARS-CoV-2 has not been detected in the neural

For EAN survey on neurological symptoms in patients with COVID-19 see https://www.surveymonkey.com/r/eansurvey_lancet

For more information on how to express interest in the registry see <https://forms.gle/xBbrwjcRTxvQnuzj7>

For the EANcore COVID-19 website see <https://www.ean.org/ean/eancore-covid-19>

A call from the European Academy of Neurology on COVID-19

The frequency, determinants, and evolution of neurological manifestations associated with coronavirus disease 2019 (COVID-19) remain unknown, because of few available data and the retrospective nature of most reports.¹⁻⁴ Furthermore, the possible neurotropic nature of the virus (leading to dyspnoea and respiratory failure) is yet to be confirmed.⁵

Neurologists are facing many other challenges in the current pandemic, including the management of older patients and those with pre-existing neurological disorders for whom ethical decisions about escalation of care (eg,