Journal Pre-proof

A neurology department at a tertiary-level hospital during the COVID-19 pandemic

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PIL: S2173-5808(20)30061-4
DOI: https://doi.org/doi:10.1016/j.nrleng.2020.04.005
Reference: NRLENG 1405
To appear in: Neurología (English Edition)
Received Date: 10 April 2020
Accepted Date: 16 April 2020

Please cite this article as: Grandas F, García Domínguez JM, Díaz Otero F, en nombre del Servicio de Neurología del Hospital General Universitario Gregorio Marañón, A neurology department at a tertiary-level hospital during the COVID-19 pandemic, Neurología (English Edition) (2020). doi: https://doi.org/10.1016/j.nrleng.2020.04.005

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Conflicts of interest: none

This study has received no specific funding from any public, private, or non-profit organisation.

Dear Editor:

In the current healthcare context, we believe it may be beneficial to share information on the adaptations implemented in the working dynamics of the neurology department at Hospital General Universitario Gregorio Marañón (Madrid, Spain) in response to the COVID-19 pandemic.

After the first patients with COVID-19 were admitted to our centre in late February 2020, we suspended clinical training sessions to respect social distancing. Essential clinical information on hospitalised patients was communicated in sessions with very few attendees: the incoming and outgoing on-call teams, ward managers, and the head of the department. From that time, all the department’s internal communication was made by email or telephone. COVID-19 training sessions were provided through online platforms.

In early March, there was an exponential increase in patients attended at the emergency department and hospitalised due to COVID-19; the magnitude of demand left the first-line departments dealing with the pandemic (the emergency, pulmonology, infectious diseases, and internal medicine departments and the intensive care unit) at the limit of their capacity. The neurology department had to be adapted to contribute to this first line of response against the pandemic while simultaneously guaranteeing the best possible care for neurological patients.

The specific targets for this adaptation were:

1) To guarantee the neurological care of patients with urgent conditions.
2) To provide the staff needed in the response against COVID-19, whenever this was required.
3) To maintain contact with patients who would normally be seen in consultations at the hospital or at other specialty centres but were unable to attend these consultations given the current circumstances.

Pursuant to these objectives, the following measures were implemented:

1) Specific neurology on-call shifts and inpatient wards, as well as the stroke unit, were maintained. Code stroke protocols were maintained, including neurointerventional procedures. Replacement of generators from nerve stimulators was also continued. Scheduled hospitalisations were suspended.
2) The neurology in-hospital consultation team was maintained.
3) Telephone consultations were implemented to replace conventional in-person consultations. Electronic prescribing was implemented. Patients with implanted nerve stimulators or drug infusion pumps received special follow-up.
4) Essential treatments continued to be administered at the neurology day hospital. Botulinum toxin administration was temporarily suspended. Immunosuppressive treatments were postponed in cases where the patient’s situation allowed for this.
5) Contact was made almost on a daily basis with emergency department and inpatient ward staff responsible for patients with COVID-19 in order to determine the number of additional physicians needed.

From the second week of March, neurologists gradually began to join the team caring for patients with COVID-19 (14 neurologists are currently in this team), frequently leading to reallocation of duties. Furthermore, the number of neurological patients attended at the emergency department and hospitalised decreased, enabling us to decrease the number of neurologists in the inpatient ward, where only patients without COVID-19 are being admitted. Patients with COVID-19 presenting neurological disorders are admitted to specific COVID-19 wards (currently, the hospital is working almost exclusively in the care of patients with COVID-19) and are attended jointly by physicians from these wards and the neurology in-hospital consultation team, except if the ward team already includes a neurologist.
The structured “withdrawal” from care activity in this dynamic situation involved the participation of all staff and residents in the neurology department, who worked with great speed, effectiveness, dedication, and commitment. Clinical research has temporarily been suspended with the exception of special cases. Undergraduate teaching, which was suspended in February, has continued through the Virtual 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.

REFERENCES