



# Letter to the Editor

## Migraine in the Time of COVID-19

According to the World Health Organization (WHO), viral diseases continue to emerge and each one represents a serious issue public health matter. In recent decades, several viral epidemics have occurred, such as the severe acute respiratory syndrome coronavirus (SARS-CoV) between 2002 and 2003, H1N1 influenza in 2009 and, most recently, the Middle East respiratory syndrome coronavirus (MERS-CoV) that arose in Saudi Arabia in 2012.<sup>1</sup>

The development of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) disease (COVID-19) in China at the end of 2019 has caused a large global outbreak and on 30 January 2020 WHO declared COVID-19 as the sixth public health emergency of international concern. Indeed, COVID-19 seems to be very contagious and has quickly spread globally, via human-to-human transmission, droplets, or direct contact. Moreover, data from reports provided by health policy agencies divide the clinical manifestations of the disease according to the severity of the clinical pictures in mild, moderate, or severe illness. Fever is the most common symptom, followed by cough, and the clinical course of the disease seems to predict a favorable trend in the majority of patients. Nevertheless, in a percentage of cases, which has not been defined yet, a sudden worsening of clinical conditions can be observed after about a week. In the most severe pictures pneumonia and acute respiratory distress syndrome (ARDS) have been reported to worsen until to sepsis and septic shock, a serious clinical condition characterized by a wide range of signs and symptoms related to multi-organ involvement.<sup>2</sup>

Currently, outside China, there are more than 40000 confirmed cases in 59 countries and Italy, as of today, is at the second place in the world for number of affected subjects.<sup>1</sup> Indeed, at the time of writing

this letter, in Italy there are 8514 patients affected by COVID-19, 529 more than yesterday (+6.6%). The total number of COVID-19 cases in our country (including deceased subjects and the recovered ones) exceeded 10,000, with a total of 631 deaths – 168 more than yesterday (an increase of 36.2%). The primary intervention to control infection is to prevent the spread of SARS-CoV. For this reason, nowadays, the Italian government has imposed unprecedented travel restrictions on its 60 million people to limit the human-to-human transmission and to control the deadly coronavirus outbreak in the country identifying the whole national territory as a “protected zone.” More specifically, severe limitations of non-necessary movements have been applied and permission would be necessary for Italians who sought to move around the country for reasons of work, health or extenuating circumstances (the so-called lockdown). In this scenario, where the risk of COVID-19 infection is very high and the citizens must justify their movements with severe penalties and sanctions if non-compliant with government provisions, there are about 6 millions of people affected by migraine, a clinical condition characterized by a well-known high personal disability and a large detrimental effect on public health. The novel monoclonal antibodies (mABs) targeting the CGRP-receptor or CGRP-ligand have been demonstrated as effective and tolerable in several trials, giving these patients a new hope.<sup>3</sup> Furthermore, widespread clinical experiences in using mABs support these data, with significant improvement of migraine disability and migraine impact on daily life of our migraine patients.

In this frame, during the last 2 days, we should have delivered the monthly treatments for about 50 migraine patients referring to the Headache Center of the Department of Neurology at the University of Campania “Luigi Vanvitelli” (32% Erenumab 70 mg/month; 54% Erenumab 140 mg/month; 10% Fremanezumab 225 mg/month; 4% Galcanezumab

120 mg/month). Surprisingly, despite the government restrictions, 100% of patients decided to pick the drug up (the closest patient was 20 minutes far away from the Center by car, the furthest patient took 2 hours by car).

We would like to share my experience, underlining how migraine patients decided to overcome all the logistical difficulties not to lose the clinical benefit they were experiencing and falling back into the abyss of their migraine attacks. It was only thanks to this context of social and organizational difficulties that we were able to perceive 2 fundamental issues: the first is related to migraine as a real and serious medical problem recognized by patients as extremely affecting on their own life, and the second related to the high efficacy and tolerability of anti-CGRP monoclonal antibodies treatment that, finally, has revolutionized the life of subjects with migraine, who can face even dangerous and serious difficulties to have it.

From a romantic point of view, our “COVID-19 experience,” like the novel “Love in the time of cholera” written by the Nobel prize Gabriel García Márquez, showed us that even the difficulties related to epidemics

can be helpful for us to see more clearly the world in front of us, despite never understanding it in its entirety.

Marcello Silvestro, MD; Alessandro Tessitore, PhD;  
Giacchino Tedeschi, MD; Antonio Russo, PhD 

Headache Center, Department of Medical,  
Surgical, Neurological, Metabolic and Aging  
Sciences, University of Campania “Luigi Vanvitelli”,  
Naples, Italy

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