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## Letter to the Editor

**Post-COVID or long-COVID: Two different conditions or the same?**

Dear Editor,

More and more patients since the beginning of the pandemic in December 2019 have recovered from acute SARS-CoV-2 infection. Few data are still available, but the literature is increasingly interested in the evaluation of the possible outcomes of the infection. According to the Office for National Statistics, about one in five COVID-19 patients develop symptoms lasting  $\geq 5$  weeks [1]. There is still no definite agreement on what must be the terminology used to define the sequelae of COVID-19; however, the National Institute for Health and Care Excellence (NICE), the Scottish Intercollegiate Guidelines Network (SIGN), and the Royal College of General Practitioners (RCGP) have released a rapid guideline regarding the management of the long term effects of COVID-19 [2]. In this paper, the clinical spectrum of this disease was arbitrarily divided into three phases based only on a temporal criterion (Table 1). Nevertheless, other terminologies are still present in literature, as 'post-acute COVID-19', 'chronic COVID-19', 'post COVID-19 syndrome', 'post-acute sequelae of Covid-19 (PASC)', and 'long-haul COVID-19'. Recently Fernández-de-las-Peñas published an article in which he defines the period between 12 and 24 weeks from clinical recovery as long post COVID. In this article, patients who had symptoms for more than 24 weeks entered the post-covid persistent range, perhaps this definition could simplify the distinction between long and post covid [3].

Additionally, some studies have shown faster healing times for people with milder illnesses, but other studies have not confirmed this. Raveendran has proposed a classification of the risk of post-COVID symptoms based on the symptoms presented during the disease, the positivity or otherwise of diagnostic and imaging tests, which will certainly be the starting point for future research [4].

The symptoms reported by patients after acute COVID infection are manifold, some complained of persistence of physical symptoms such as anosmia, dysgeusia, fatigue, dyspnea, chest pain, and cough, other frequently reported psychological and cognitive symptoms, as anxiety, depression, poor memory and concentration [5–7]. Carfi et al. reported persistence of at least 1 symptom, particularly fatigue and dyspnea, in 87.4% of patients who recovered from COVID-19 [8]. A pilot study in India showed that the average recovery time is 25 days (95% C.I. 16, 34) with no significant differences adjusting data for gender and age [9].

The study by Halpin et al. [10] assessed the persistence of symptoms and the need for rehabilitation after discharge for COVID-19 from intensive care units (ICU) versus ordinary cure ward (OCW). They showed that that fatigue is the most common reported symptom by 72% of participants in the ICU group and 60.3% of par-

**Table 1**

The clinical spectrum of Covid-19 [2].

Acute covid-19 infection	Signs and symptoms of covid-19 for up to four weeks
Ongoing symptomatic covid-19	Signs and symptoms of covid-19 present from four weeks and up to 12 weeks
Post-covid-19 syndrome	Signs and symptoms that develop during or after an infection consistent with covid-19, present for more than 12 weeks and are not attributable to alternative diagnoses

ticipants in the OCW group, followed by breathlessness (65.6% for the ICU group and 42.6% for the ward group), and psychological distress (46.9% in ICU group and 23.5% in OCW group). This study also found that 60% of the ICU patients and 15% of the ward group remained off-sick from work at the time of follow-up, and raised the possibility that the sequelae of the most severe cases of Covid-19 may be at least in part related to the post-intensive care syndrome [11].

Chest CT scan plays a crucial role in the post-discharge evaluation of patients with COVID. At discharge CT about 94% of patients still show radiological alterations [12,13], while Liu's study recognizes resolution of the alterations in 53% of patients with mild disease 3 weeks after discharge [13]. Han describes the follow-up with CT scan 6 months after discharge which showed fibrotic-like changes in the lung in more than one-third of patients who survived severe coronavirus disease 2019 pneumonia. During the acute phase these patients had more severe disease and were older [14].

In conclusion, COVID-19 is a new disease and little is known about what the long-term effects may be. The majority of patients generally report a worsening of the quality of life for which it is necessary to organize multispecialistic checks to better attend to the patient's needs [15].

At the moment, with the studies available, it seems that the distinction between post COVID and long COVID is very blurred, due to a temporal evaluation only. In our opinion, sharpening the definition of post COVID and long COVID is more than a matter of academic interest. In the meanwhile, we propose that the terminology should be maintained simple (e.g., acute and persistent Covid-19 vs. long Covid) based on a strict temporal cut-off (i.e., less or more the 12 weeks), aiming to elucidate if Covid-19 may become chronic; and to know if we will be able to develop a diagnostic strategy that may help in distinguishing symptoms due to a post-viral phase, which may vanish with the time, or to aberrant immune and perhaps haemostatic responses, which may persist and possibly get worse.

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None declared.

## Competing interest

None to declare.

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