

Post-COVID or long-COVID? That is the question

Salvatore Chirumbolo, Umberto Tirelli

To the editor In their recent manuscript, Lippi et al¹ addressed some fundamental issues concerning the post-COVID syndrome, which made us debate how to more precisely define the terms post-COVID and long-COVID. We are persuaded that this still represents a fundamental concern for medicine.¹ Recently, Antony Fauci² introduced the concept of post-COVID in its simplest meaning, that is, something coming “after” COVID-19, yet recalling many symptomatic features of the COVID-19 itself. In this context, the term long-COVID, which suggests the existence of “long haulers” of COVID-like symptoms, was introduced by the World Health Organization and later the Centers for Disease Control, to describe a syndrome with a COVID-like pattern, yet with symptoms lasting for 6 months or longer.

Notwithstanding, in our opinion, Lippi et al¹ reported a rather simplistic classification of post-COVID and long-COVID. The authors represented the terms in a graph, leading the readers to believe that if a difference does exist, it simply consists in the length of time for which the symptoms persisted following a SARS-CoV-2 infection. Post-COVID is a preliminary term, referring to a simple observation of COVID-like symptoms immediately following COVID-19. Its use among experts spread over, because the pandemic ceased very recently. To consider the concept of long-COVID, with reference to time, we need at least several months passing from the end of the pandemic. However, Lippi et al¹ allowed us to expand the debate on a conceptual terminological bias, which we consider worth discussing.

Some authors state that the difference between post-COVID and long-COVID is blurred,³ and to come up with clear definitions of post-COVID or long-COVID, we should consider the persistence of symptoms either directly linked to a current SARS-CoV-2 infection or the symptoms indicating extended damage caused by previous and resolved SARS-CoV-2 infections. Controversies regarding the definitions of such post-acute sequelae following COVID-19 still exist, because patients may suffer from several SARS-CoV-2 infections throughout their life, which may overlap with a clinical landscape of

post-COVID symptomatology.⁴ With reference to that, Mantovani et al⁵ suggested the persistence of a SARS-CoV-2 infection in some cases of post-COVID.

A definition of long-COVID as a permanent, even chronic, systemic pathology, causing fatigue, brain fog, cognition impairment, musculoskeletal pain, sleep disorder, and general weakness, may help clinicians to discern real post-acute sequelae of COVID-19 from permanent COVID-19, even though some authors did not address this issue deeply enough.¹ It is possible to distinguish typical symptoms associated with COVID-19, such as fever, dyspnea, persistent cough, gastrointestinal disorders, ageusia / dysgeusia, or anosmia from typical post-COVID manifestations, such as fatigue, impaired usual activity, generalized weakness, sleep impairment, depression, and musculoskeletal pain. The latter are usually intertwined with COVID-19 symptoms, and subsequently reach a symptomatology pattern mostly including fatigue, weakness, brain fog, pain, and cognition impairment upon a negative SARS-CoV-2 swab test.³ This is a very simple approach to introduce possible discrimination between COVID-19 and post-COVID syndrome. However, this simplistic approach, used to distinguish between a long-lasting mild COVID-19 and a clear long-COVID syndrome, can be disproved by symptoms erroneously attributed only to COVID-19, such as persistent dyspnea not related to cardiopulmonary impairments.⁶ According to some authors, at least 53% of patients suffering from SARS-CoV-2 infection and mild COVID-19 might in fact suffer from long-COVID, and about 60% of these patients suffered from post-COVID dyspnea.⁶ As respiratory impairments are typical features of COVID-19, probably a diagnostic test discriminating between cardiopulmonary and other types of dyspnea can help clinicians to correctly diagnose a post-COVID syndrome and discern it from a permanent COVID-19 inflamed status. Moreover, it could be recommended to discern real post-COVID by assessing the symptomatic patients during a periodic immunological follow-up (eg, serum specific receptor binding domain for spike protein, immunoglobulin M / immunoglobulin

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G) for the 6 months following the latest SARS-CoV-2 negative swab to prevent the occurrence of statistic confounders, for example, from newly acquired SARS-CoV-2 infections. A patient having any single or multiple symptoms, such as fatigue, weakness, sleep disorders, cognitive impairments, brain fog, and musculoskeletal pain for as long as 6 months without any contact with newly incoming coronaviruses, may be included in a post-COVID pattern of systemic pathology.

Correct discrimination between a prolonged form of mild, persistent COVID-19, due to the persistence of SARS-CoV-2 allergens or anti-idiotypic antibodies, and post-COVID associated with systemic damage to microcirculation and immune regulation after the virus disappeared, is still challenging, and scientists should take this into account to shape and promote proper therapy.

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CONFLICT OF INTEREST None declared.

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