

Long COVID: a new word for naming fibromyalgia?

Xavier Mariette 

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Rheumatology department,
Université Paris-Saclay,
Assistance Publique - Hôpitaux
de Paris, Hôpital Bicêtre,
INSERM UMR1184, Le Kremlin
Bicêtre, France

Correspondence to

Professor Xavier Mariette,
Rheumatology Department,
Université Paris-Saclay, Hôpital
Bicêtre, 78 Avenue du Général
Leclerc, Le Kremlin Bicêtre,
94270, France;
xavier.mariette@aphp.fr

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ABSTRACT

Long COVID is the name given to a syndrome comprising a wide variety of symptoms persisting more than 3 months after acute benign COVID-19, with a prevalence ranging from 10 to 80%. Symptoms are very close to fibromyalgia. Several studies showed that long COVID prevalence was much higher after the first wave of the pandemic and was associated to the fact of thinking having had COVID rather than having had really COVID. Thus, it was the stress of the first wave with the lockdown and not the consequences of the infection that probably induced this high frequency of long COVID. Numbers of studies tried to find objective biological abnormalities for explaining long COVID but none of them could be replicated and convincing. The concept of long COVID seems to be a repetition of history of medicine, in which the doctors and the society gave different names to fibromyalgia with the objective of trying to highlight the fact that fibromyalgia could be a somatic disease with a well understood pathophysiology and to avoid to focus on the psychosomatic aspects of the disease. In conclusion, "to name is to soothe" as said by Roland Barthes. However, "Naming things wrongly adds to the world's unhappiness" was saying Albert Camus. Thus, the term of long COVID, which suggests viral persistence of impaired immune response to the virus, is inappropriate and should be replaced by fibromyalgia-like post-COVID syndrome. Research on the psychosomatic and somatic mechanisms involved in these fibromyalgia-like post-viral syndromes must be encouraged.

COVID-19 has caused at least 18 million deaths across the world.¹ However, most people with COVID-19 have no or only mild clinical manifestations, including upper respiratory disease. In a high percentage of these patients (from 10% to 80%) having suffered from benign COVID-19 without any organ damage sequelae, a wide variety of symptoms persists more than 3 months after COVID-19, which have been called long COVID.² Some patients with immune deficiency may have prolonged SARS-CoV-2 positive PCR and those patients do really have long COVID. Other patients having experienced severe COVID-19 pneumonitis or having spent time in intensive care unit may suffer for months of persistent dyspnoea, fatigue and other symptoms analogous to those presented by patients with the same severe diagnosis of other origins. Lastly, most patients called 'long COVID' suffer after a benign or mild COVID-19 infection of anosmia and ageusia but also of numbers of other non-specific symptoms such as fatigue, widespread pain, sleep disturbances, cognitive problems and foggy brain. WHO proposed criteria of long COVID,³ and it is interesting to note how most of these symptoms of long COVID are close to what rheumatologists call fibromyalgia.^{4,5}

Fibromyalgia is well known by rheumatologists and is an entity that involves almost 5% of the general population, especially women.⁴ The term of fibromyalgia was introduced in the 1980s. Its advantage is to put a name on symptoms presented by the patients, but it does not reflect the origin or the pathophysiology of the disease. Even if the entity undoubtedly exists, its origin is still unknown and among all theories proposed to explain it, one of the most commonly admitted is a psychosomatic syndrome close to post-traumatic stress. Indeed, analogy was found between this entity and post-traumatic stress syndrome presented by British soldiers after the gulf war.⁶ A significant proportion of women with fibromyalgia had to face with sexual violence during childhood or young age.⁴ Stress may induce central nervous consequences leading to central sensitisation of pain.⁴

It is amazing to note, through history of medicine, how the doctors and the society gave different names to this entity with the objective of trying to highlight the fact that fibromyalgia could be a somatic disease with a well understood pathophysiology and to avoid to focus on the psychosomatic aspects of the disease. It moved from the neurasthenia of the French romantics writers of the 19th century to the recent Ehlers-Danlos spectrum (box 1). I am afraid that history is repeating itself with the concept of long COVID. Numbers of arguments suggest that long COVID could be a post-traumatic syndrome just like fibromyalgia.

One of the most convincing arguments is the study made after the first wave of COVID-19 in France by epidemiologists and psychiatrists from Paris Cité University in 26 823 healthy subjects followed in the CONSTANCE cohort.⁷ PCR test was not easy available at that time in France. People were asked if they thought they had done COVID-19 and about the presence of persistent symptoms of long COVID. In addition, a serological test was made in all subjects to be able to confirm or not if they had been in contact with Sars-CoV-2. The results were very clear: all the symptoms of long COVID except anosmia were linked to the fact of thinking having had COVID-19 and not to the fact of having had really COVID-19 assessed by a positive serology. Thus, it was the stress of the first wave with the lockdown and the saturation of emergency units and not the consequences of the infection that probably induced this high frequency of long COVID. An interesting study made in Strasbourg showed that the frequency of long COVID after Sars-CoV-2 exposition was almost twice higher after the first wave compared with the second one, whereas both waves in France were due to the same variant of Sars-CoV-2.⁸ The stress in the society was much less important during the second wave than in the first one. Likewise, long COVID has been found



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Box 1 The different names of fibromyalgia through medicine history

- ⇒ Neurasthenia.
- ⇒ Fibrositis.
- ⇒ Myalgic encephalomyelitis.
- ⇒ Chronic fatigue syndrome.
- ⇒ Idiopathic diffuse polyalgic syndrome.
- ⇒ Gulf War syndrome.
- ⇒ Macrophages myofasciitis.
- ⇒ Postviral syndrome.
- ⇒ Sicca asthenia polyalgia syndrome.
- ⇒ Chronic Lyme disease.
- ⇒ Chronic chikungunya disease.
- ⇒ Ehlers-Danlos spectrum.
- ⇒ Long COVID.

much less frequent after Omicron waves that were less severe,² whereas it could also be because the different variants may act differently for inducing long COVID.

Long COVID is not more frequent among patients with inflammatory rheumatic diseases. In a prospective cohort study conducted in the Netherlands, Boekel *et al* found that the frequency of long COVID was numerically but not statistically more frequent in patients with inflammatory rheumatic diseases compared with healthy controls (adjusted OR 1.53 (95% CI 0.90 to 2.59); $p=0.12$).⁹ Interestingly, like in the French study, among patients and healthy controls without any history of COVID-19, the frequency of symptoms of the long COVID-19 spectrum was high and higher in patients with inflammatory rheumatic disease, suggesting that they probably correspond to fibromyalgia-like symptoms known to be more frequent in inflammatory rheumatic diseases.

A long-term study made in almost 2 million people in Israel compared long-term symptoms in patients having done or not Sars-CoV-2 infection and found that, after 6 months, there were almost no difference between groups.¹⁰ A Dutch cohort study in people from general population filling regularly questionnaires showed only around 11% more patients complaining of one of the long-COVID symptoms at 90–150 days after COVID-19 compared with before COVID-19 and compared with matched not infected controls.¹¹ This is not different of what has been shown 6 months after any viral infection, where up to 12% of patients may suffer from persistent fatigue.¹²

Numbers of studies tried to find objective biological abnormalities for explaining long COVID but none of them could be replicated and convincing. Most of studies failed to detect the virus at the time of long COVID symptoms, which should lead to replace the term long COVID by post-COVID-19 symptoms. Phetsouphanh *et al* found that IFN β and IFN λ were increased in patients with long COVID symptoms 8 months after infection compared with patients without symptoms.¹³ However, the 2 groups were not comparable with 8/31 patients having been hospitalised in the long COVID group vs only 2/31 in the control group and increase of IFN level may persist in patients for a long time after severe COVID. A recent proteomic study also found an IFN signature in patients with long COVID¹⁴ but serum IFN α level was found not different from patients without symptoms after COVID-19 in another study.¹⁵ An autoimmune origin was looked for. In a recent study, some patterns of autoantibodies were detected after Sars-CoV-2 infection, but not differently between patients with persistent symptoms and those without.¹⁶

Likewise, in an extensive biological study in healthcare workers having experienced benign or mild COVID, no difference in antibody responses to the spike protein or nucleoprotein, virus neutralisation, T cell responses and profile of antibody waning, could be detected between subjects having or not persistent symptoms after 4 months.¹⁷

In conclusion, 'to name is to soothe' as said by Roland Barthes a famous French philosopher and it is important to put a name on the symptoms present in around 5 to 10% of people more than 3 months after a benign COVID-19 infection. But 'naming things wrongly adds to the world's unhappiness' was saying Albert Camus. Thus, the term of long COVID, which suggests viral persistence of impaired immune response to the virus, is certainly unappropriated and should be replaced by fibromyalgia-like post-COVID-19 syndrome that better reflects the reality and will allow the patients to use all the non-pharmacological therapeutic arsenal used in fibromyalgia for being cured. Indeed, in this specific form of fibromyalgia where the stressing event is clearly identified, the prognosis is better than common fibromyalgia after using these therapeutics.¹⁸ Research on the mechanisms involved in these fibromyalgia-like postviral syndromes in order to dissect the psychosomatic and somatic involved mechanisms, the consequences on central sensitisation of pain and the comparison with common fibromyalgia, must be encouraged.

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ORCID iD

Xavier Mariette <http://orcid.org/0000-0002-4244-5417>

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