

## Are Patients Exhibiting Post-Coronavirus Disease (COVID) Symptoms at 12 months the Same at 5 or 9 Months? The Fluctuating Nature of Post-COVID

TO THE EDITOR—

We have read with great interest the paper published in the *Clinical Infectious Diseases* by Seeßle et al [1]. These authors assessed a sample of 96 coronavirus disease 2019 (COVID-19) survivors during the first year after the infection (5, 9, and 12 months after) and reported a decrease in the prevalence of some post-COVID symptoms, for example, hair loss (from 26.1% to 10.4%), but an increase of others symptoms such as fatigue (from 41.7% to 53.1%) and dyspnea (from 27.1% to 37.5%) from 5 months to 12 months after [1]. The fluctuating/relapsing nature of post-COVID symptomatology has been observed by our research group in a meta-analysis showing a “rolling coaster pattern” with a decreased prevalence of post-COVID symptoms 30 days after hospitalization/onset, an increase 60 days after, but another decrease > 90 days after [2]. The results from Seeßle et al support this fluctuating pattern of the post-COVID symptoms: the prevalence of some symptoms increases, but

the prevalence of others decreases [1]. However, an important missing piece of information identified in Seeßle et al study [1] is to determine whether the changes (either decrease or increase) in prevalence rates for any post-COVID symptom are derived from the same patient reporting that particular symptom previously or the authors pooled data for the total sample. This would be highly important to determine because we do not know if those patients who reported a particular post-COVID symptom at 1 year were the same, exhibiting the same symptom at 5-month or 9-month follow-ups. Due to the fluctuating and relapsing pattern of post-COVID symptoms, it would be possible that some patients not reporting symptoms 5 months after would experience symptoms 12 months after. This discussion would be also related to the fact that some patients can exhibit persistent symptoms from the onset of the infection (if they exhibit this symptom at the acute phase) or “de novo” post-COVID symptoms (if the symptoms were not experienced at the acute phase). Accordingly, some patients could develop symptoms several months after the infection (delayed-onset post-COVID symptoms) [3]. Future longitudinal studies investigating post-COVID symptoms at

different follow-up periods should carefully monitor each particular patient and not just the total sample as a whole.

### Note

**Potential conflicts of interest.** The author: No reported conflicts of interest. The author has submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest.

César Fernández-de-las-Peñas<sup>✉</sup>

Department of Physical Therapy, Occupational Therapy, Physical Medicine and Rehabilitation, Universidad Rey Juan Carlos (URJC), Madrid, Spain

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Correspondence: C. Fernández-de-las-Peñas, Facultad de Ciencias de la Salud, Universidad Rey Juan Carlos, Avenida de Atenas s/n, 28922 Alcorcón, Madrid, Spain ([cesar.fernandez@urjc.es](mailto:cesar.fernandez@urjc.es)).

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