



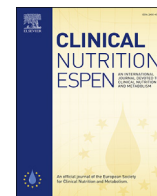
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Letter to the Editor

Overweight subjects have a higher risk of malnutrition and loss of function after severe COVID infection



Keywords:

Long COVID-19
Muscle strength
Malnutrition
Obesity
Cohort study
Intensive care unit

Dear Editor,

We read with great interest the study by Fiorindi, C et al. [1]. This study conducted in a cohort of severe-COVID-19 patients assessing nutritional status 3 months after discharge from hospital [1] reported that 8.4% of patients were malnourished at discharge and none at 3 months. In this study, malnutrition diagnosis was based on the 2015 ESPEN consensus [2], including different criteria for malnutrition than those of the international consensus (GLIM criteria [3]), in particular the postulation that patients with a BMI above 22 are not malnourished. We do not agree with this statement. On the contrary, patients suffering from obesity have, because of metabolic modifications, especially insulin resistance, a higher protein catabolism than subjects of normal weight, in the event of traumatism [4] and also well reported in acute COVID patients with obesity [5]. Secondly, accelerated muscle loss is a major factor of morbidity-mortality in obese COVID-19 patients [6]. The follow-up of our cohort of 288 patients confirms these results [7,8]. At 6 months post-discharge, 14.9% had persistent malnutrition and 5.9% complained of a significant decrease in muscle strength. Furthermore, we observed that obese subjects had a higher risk of functional loss or undernutrition 6 months after a severe COVID infection, as well as patients with a stay in intensive care. As in Fiorindi et al. study, most of our patients were already undernourished at admission. Malnutrition tended to have begun during the initial phases of the disease occurring at home since, upon admission, our patients declared significant involuntary weight loss when compared to their habitual weight [8]. Accordingly, it is not excluded that malnutrition may precede the infection. A recent study showed that patients with a recent history of malnutrition could be at higher risk of severe COVID-19 [9]. Weight loss and undernutrition was seemingly associated very early with a major decrease in food intake which remained strongly impaired in half of the patients at hospital discharge, despite nutritional support. Acute sarcopenia may mostly affect patient prognosis and incur post-COVID-19 functional and physical deterioration, independently of BMI. The degree of muscle

mass and functional loss can be influenced by a multiplicity of factors, including the patient's general pre-infection medical and functional condition, especially in older adults [10]. This functional condition prior to infection is typically not analyzed and/or unknown. Some patients still appeared very weak 6 months after the infection, despite advice to increase physical activity associated with protein support, or referral to physiotherapists or adapted physical activity therapists. Most of our patients had a low physical activity assessed by IPAQ-SF prior to contracting COVID-19 (56.3%), which may represent a risk factor for severe COVID-infection [11,12]. Identifying patients outside of expected recovery trajectories and who could benefit from additional rehabilitation and/or additional investigations to detect post-COVID nutritional complications seems essential.

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None declared.

Contribution of the authors

Didier Quilliot: wrote the manuscript and analyzed the literature.

Declaration of competing interest

I declare no conflict of interest in relation with this study.

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