

Obesity and COVID-19. The Story has not been Fully Written Yet

Obesidad y COVID-19. La historia no se ha terminado de escribir

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In November 2019, China reported the emergence of a new coronavirus of animal origin capable of causing severe respiratory infection. By March 2020, the World Health Organization had declared a pandemic. On March 2, Argentina reported its first case, and more than 10 million cases were recorded in the months that followed. The implementation of restrictive measures and social distancing, together with the introduction of vaccines, helped mitigate the impact of the infection, which nevertheless resulted in 130,829 deaths in the country by January 2026.¹ Seropositivity reached 39.2% in the city of Puerto Madryn.²

Very early in the pandemic, several studies identified factors associated with unfavorable outcomes. Studies from the first six months showed that obesity was associated with greater symptom severity, progression to respiratory distress, hospitalization in general wards and intensive care units, and a need for mechanical ventilation. Paradoxically, however, no increased risk of mortality associated with obesity was demonstrated.³ The unfavorable course has been attributed to persistent inflammation, immune dysfunction, increased viral replication, mechanical ventilatory impairment, and a prothrombotic state.⁴

Over time, concern arose about the development of respiratory sequelae and prolonged manifestations of COVID-19. A meta-analysis of the medical literature published up to 2021 estimated that tomographic abnormalities –such as ground-glass opacities and pulmonary fibrosis– were present in approximately one third of cases.⁵ Obesity has been described by some authors as a factor associated with the persistence of tomographic and functional abnormalities.^{6,7}

In this context, the study by González et al⁸ published in this issue of RAMR provides timely and valuable evidence. The authors conducted a prospective, multicenter cohort study with one-year follow-up after hospital discharge, evaluating the evolution of patients hospitalized for COVID-19 using lung function tests and imaging.

The main finding of the study is that obesity was not associated with a higher prevalence of objectively measurable respiratory sequelae. No statistically significant association was observed between a presence of a body mass index (BMI) ≥ 30 kg/m² and reduced forced vital capacity, desaturation during the 6-minute walk test, or the presence of a fibrosis-like tomographic pattern on computed tomography after multivariable analysis. These findings with those of the SECUELAR cohort, also collected in our country, in which BMI was not associated with alterations in respiratory functional parameters, as well as with other studies from different countries.⁹⁻¹¹

These results suggest that COVID-19 may behave differently at different stages of its course. In the acute phase, obesity may be associated with greater clinical severity and worse outcomes, however once this stage has been overcome, BMI does not necessarily appear to be a prognostic factor for the development of imaging or functional abnormalities. Therefore, BMI –like any other factor potentially associated with an unfavorable outcome– should be evaluated within the individual clinical context, and also considered as a potential confounding factor. It is also important to have local data, since the behavior of each population may vary significantly depending on factors that we may be unable to evaluate

or measure, including cultural or socioeconomic determinants.

An interesting aspect of the study is the observed association between a forced vital capacity < 80% at three months and the development of a fibrosis-like tomographic pattern at twelve months. This finding is consistent with previous studies showing that early functional impairment predicts unfavorable outcomes in COVID-19 survivors.¹² The clinical message is that early pulmonary evaluation should be integrated into the follow-up of hospitalized patients after discharge.

In summary, the work by González et al adds a new piece of evidence to our understanding of post-COVID-19 respiratory outcomes. Beyond its potential limitations –and considering how difficult it is to conduct this type of study, particularly in our setting– the effort required and the rigor with which it was carried out deserve recognition. Cohort studies are costly, require substantial human resources, and are often threatened by loss to follow-up.¹³ Although the incidence of COVID-19 has declined, it remains important to maintain surveillance of these cases and to obtain objective information, including inflammatory markers, metabolic assessments, and more sensitive studies such as cardiopulmonary exercise testing, in order to further complete our understanding.

Given the findings of Argentina's National Risk Factor Survey that 6 in 10 adults are overweight, healthcare professionals must actively promote healthy lifestyle habits.¹⁴ Another area in which healthcare personnel play a central role is vaccination counseling. Physicians are widely identified as a trusted source of health information, and their explicit and routine recommendation increases vaccine acceptance and uptake across all population groups.¹⁵ The challenge is to recognize that the story of COVID-19 is not fully written yet, and that we can influence the intersection between the obesity endemic and the pandemic.

Conflict of interest

The author has no conflicts of interest to declare in relation to this publication.

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