

Response

To the Editor:

With great interest, we read Dr Alberto Morales Salinas¹ comments in which he questions the paradoxical association between obesity and prognosis in heart failure.² Throughout the last decade, numerous cohort studies have been published which detail the so-called “obesity paradox” in the context of both acute and chronic heart failure.³⁻⁵ Body mass index (BMI) is not the only conventional cardiovascular (CV) risk factor that has a favorable influence in patients with heart failure, given that high concentrations of low density lipoproteins and total cholesterol, as well as high blood pressure, have also been associated with a survival advantage in heart failure.⁶⁻⁸

We agree with Dr Salinas’s ideas and point of view on this controversial topic and recognize the interest of his new hypothesis in as much as most of these studies lack an element of control of the pharmacologic agents used, which could introduce confusion into the final results. We agree that documenting patient height, weight, BMI and kidney function forms part of providing top quality attention and that we need this documentation to avoid dosage errors and unfavorable clinical course.⁹

This new hypothesis may be more applicable to studies conducted in the acute context—when patients are attended while presenting acute decompensated heart failure or acute coronary syndrome—because this is when

medication dosage tends not to be proportionate to weight, height and BMI. However, even in these acute situations, a vast amount of data points to the existence of an inverse relation between obesity and prognosis.^{3,10,11} In contrast, the opposite occurs in patients with stable coronary disease (CD), or with other chronic conditions—eg, chronic obstructive pulmonary disease (COPD), rheumatoid arthritis, and terminal kidney disease (TKD)—and the “obesity paradox” phenomenon, or in older patients, in whom this new hypothesis is less likely to play a role in “reverse epidemiology.”^{12,13}

One specific reason that could explain why the “obesity paradox” is observed in such a wide range of diseases—CD, heart failure, arterial hypertension, and dyslipidemia—could be the more energetic treatment administered to obese patients. In one study of patients with CD, the highest BMI values were associated with better administration of CD treatment according to established guidelines, and led to lower rates of in-hospital mortality.¹⁴

Many studies document clear evidence of the fact that low weight patients are not the only ones who present a worse prognosis. Moreover, patients with an ideal weight or even slightly overweight have a worse prognosis than those who are slightly obese,⁴ although many studies have highlighted the fact that prognosis is worse in substantially obese patients than in those who are slightly obese.¹⁵ However, Lavie et al⁵ reported a very good prognosis for patients with intense obesity and those who had a greater quantity of fat—a considerably better prognosis than that of patients with less fat—though it was clear they were far from being considered “cachexic.” Logistic regression analysis found the highest percentage of body fat ($\chi^2=9.1$; $P=.002$) was the most powerful, independent predictive factor for illness-free survival. In this population, for every 1% absolute increase in percentage body fat we found a >13% reduction in major clinical episodes.⁵ Various possible explanations exist for the inverse association between BMI and mortality; it is crucial to investigate the differences in pharmacologic agent dosage, secondary effects and tolerability in relation to BMI. This could provide a partial clue to the explanation and, therefore, we think there is a clear need for new clinical studies to clarify fully the mechanism underlying these paradoxical relations, in the hope they lead to new, definitive treatments.

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