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Cardiac involvement in COVID-19: does echocardiography matter? Response

Afección cardiaca por COVID-19, ¿importa la ecocardiografía? Respuesta

To the Editor,

We would like to thank Jorge-Pérez and Durán-Cambra for their comments on our study, which without doubt provide a richer context for the interpretation of our analysis.[1] We nevertheless feel that it is important to clarify 2 points that might have caused confusion.

In our study, we reported the echocardiography findings in an unselected sample of critically ill patients with COVID-19 and related them to mortality. We also analyzed the concentrations of several biomarkers; however, these were assessed in relation to ventricular dysfunction and not to prognosis, and our results cannot therefore be directly compared with previous findings. The second point is that we attempted to reiterate the recommendations of the consensus documents of the European Association of Cardiovascular Imaging and the Spanish Society of Cardiac Imaging. These societies both caution against the routine use of echocardiography in COVID-19 patients, instead recommending that echocardiography be reserved for those patients who are most likely to benefit from the procedure. The patient profiles considered to warrant echocardiography are similar to those mentioned in the American College of Cardiology document and include some that are highly prevalent in our daily clinical practice; however, we do not see the complete match that the authors appear to suggest in their letter.

Our conclusions agree with those of the European registry[2] cited by Jorge-Pérez and Durán-Cambra insofar as all the included echocardiograms were carried out according to specific clinical criteria and the study authors also emphasized the importance of avoiding indiscriminate use of echocardiography in COVID-19 patients. Moreover, although the echocardiography results in that study led to treatment changes in one third of patients, the prognostic effect of these changes was unclear.

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Our study was conducted in a small sample during the early phase of the pandemic and, for operational reasons, scans were performed without Doppler, using a Vscan Extend echocardiography scanner (General Electric, United States). As the authors know, non-Doppler echocardiography does not permit noninvasive monitoring of cardiac output or the assessment of diastolic function. We agree that in this situation it is important to assess the right ventricle, which has been found to be more affected than the left ventricle in many studies. Indeed, right ventricle function was one of the assessed variables in our study.

There is a debate to be had about the role of echocardiography beyond the assessment of biventricular function, for example in the monitoring of cardiac output or the optimization of mechanical ventilation, and the utility of lung ultrasound. However, these questions were not objectives of our study.

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