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Letter to the editor

Comment on: Echocardiographic 60-day mortality markers in patients hospitalized in intensive care for COVID-19

To the Editor;—The study "Echocardiographic 60-day mortality markers in patients hospitalized in intensive care for COVID-19" by Daz et al. has been read with significant attention.¹ It's an honor to have read such a refined and elegant literary work. In patients admitted to the intensive care unit with COVID-19, right ventricular dilatation and acute cor pulmonale (defined as right ventricular dilatation accompanied by paradoxical septal motion) are present echocardiographic markers independently linked with mortality within 60 days. The paper provides a concise summary of the few accessible findings regarding imaging behavior, namely echocardiographic imaging, in individuals with the most severe forms of the disease. However, adding to the study's conclusions would be a privilege.

Firstly, Clinical and demographic information, including underlying co-morbidities, biomarkers, in-hospital treatment regimens, and outcomes, were not entirely collected and analyzed. 2021 research revealed substantial changes in treatment regimens between the two waves, including the use of antibiotics, hydroxychloroquine, steroids, and remdesivir.² Secondly, authors may have reported early echocardiographic findings as critical care patients have acute alterations during the infection cycle. Specifically, Karagodin et al.³ demonstrated Echocardiogram findings collected at the median of three days after admission (interquartile range, 1–9). Due to safety concerns regarding the transmission of the COVID-19 virus, enrolling centers followed different echocardiographic acquisition protocols, resulting in variable completeness of the echocardiographic studies: ten of the thirteen centers conducted limited exams as their primary COVID inpatient practice, whereas three of the thirteen centers conducted comprehensive exams. Emerging study indicates that COVID-19 cardiovascular consequences pose a significant concern beyond respiratory disease; nevertheless, the etiology remains incomplete. Any severe infection raises metabolic demands, and individuals with underlying heart disease lack the reserve capacity to adjust.³ Also, several studies have yielded contradicting results; for example, research by Matteo Cameli et al.⁴ suggested that due to the necessity for balancing between risks of dissemination and advantages for patients, the common grounds and methodologies to perform echocardiogram should be reassessed in COVID-19 patients; thus, the choices for the use of portable devices and transesophageal echocardiography should be tailored on the individual patient based on his clinical stipulations. For an essential examination of biventricular activity, valve disease, and pericardial effusion, portable devices are simpler to clean and cover than conventional echocardiographic devices.⁴ Additionally, authors should have reported that The right

ventricle is less ideal for quantitative ECHO-analysis than the left ventricle, primarily because of its complicated geometry, the limited number of well-defined reference points, and changeable position within the thorax. Because of the significant impact of LV size and function on RV geometry and performance, the complicated and distinct contraction-relaxation mechanism among the main segments of the RV, and the exceptionally high reliance of RV size, architecture, and function on RV loading circumstances, even in the face of unchanged myocardial contractility, collecting ECHO-data and, more importantly, their appropriate evaluation is frequently a difficult task.⁵

Disclosure

None.

Declaration of Competing Interest

None.

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