

Revised Letter to the Editor

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Left ventricular ejection fraction cutpoint of 50% for heart failure with preserved ejection fraction

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Revised Letter to the Editor

I have read the article by Vanderpool and colleagues published in the JAMA Cardiology with a great interest (1). The authors conducted a very valuable and interesting study on a large cohort of 10023 participants that 2587 (25.8%) of those had pulmonary hypertension heart failure with preserved ejection fraction. The results in this study suggest that pulmonary hypertension heart failure with preserved ejection fraction is very common in the invasive hemodynamic assessment. In addition, transpulmonary gradient, pulmonary vascular resistance, and diastolic pulmonary gradient are associated with mortality and cardiac hospitalizations. However, the authors used a left ventricular ejection fraction (LVEF) cutpoint of 45% for heart failure with preserved ejection fraction. Could the authors use a LVEF cutpoint of 50% for heart failure with preserved ejection fraction based on the heart failure guidelines? According to the 2013 ACCF/AHA guidelines (2) and 2016 European Society of Cardiology (ESC) guidelines (3), the diagnosis of heart failure with preserved ejection fraction (HFpEF) is defined as a LVEF of 50% or greater. Patients with a LVEF in the range of 41 to 49% are classified into a borderline or intermediate group in the 2013 ACCF/AHA guidelines (2), and are considered as heart failure with mid-range ejection fraction (HFmrEF) in the 2016 ESC guidelines (3). Using a LVEF cutpoint of 50% for heart failure with preserved ejection fraction would keep this article up to date in the future and have a greater impact for this study.

Furthermore, one major target in treating patients with symptomatic heart failure is elevated left ventricular filling pressure. Jugular venous pressure is usually used in clinics in order to estimate left ventricular filling pressure. Jugular venous pressure reflects right atrial pressure (central venous pressure) that can be estimated by examining the internal jugular veins. In a study of 1000 patients with advance heart failure undergoing transplant evaluation, Drazner

et al. demonstrated that a right atrial pressure of 10 cm H₂O or greater is strongly associated with a pulmonary capillary wedge pressure of 22 mm Hg or greater (4). Could Vanderpool and colleagues do a further analysis for this large cohort to find a link between pulmonary capillary wedge pressure and right atrial pressure if it is possible? This would bring more benefits in daily clinical practice that could guide therapy in heart failure patients with preserved ejection fraction.

References

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