What Is the Implication of Large V Wave in Pulmonary Capillary Wedge Pressure Waveform?

Teruhiko Imamura

Division of Cardiology, University of Chicago Medical Center, Chicago, IL, USA

Dear Editor,

I have read an article by Hayashi et al. [1] with great interest. They re-evaluated the classical finding of the relationship between the large V wave in the pulmonary capillary wedge pressure waveform and the existence of severe mitral regurgitation (MR). Academically, their finding is of great interest, whereas the clinical implication of their findings, which is the dominant concern of most clinicians, might be uncertain.

For the screening of severe MR, patients' dyspnea and signs of pulmonary congestion as well as typical systolic murmur around the apex are obvious. Trans-thoracic or rather transesophageal echocardiography is available to diagnose severe MR with detailed etiological information. Given the invasiveness, high cost, and relatively low diagnostic sensitiv-

ity, right heart catheterization may not be useful to screen severe MR in the current era.

During transcatheter intervention for severe MR, right heart catheterization is useful to monitor hemodynamics, whereas again echocardiography may have great advantage to monitor the severity of MR. Given the relatively low sensitivity, the absence of large V wave does not indicate normalization of MR. Large V wave is not suitable either for grading the severity of MR.

Nevertheless, I agree with them that now is the time to review this classical index. Beyond predicting the existence of severe MR, the large V wave may have some prognostic implication on future worse outcomes such as deterioration of exercise capacity or development of MR, which would be a next concern of clinicians.

Disclosure Statement

The author has no conflicts of interest to declare.

Funding Sources

The author did not receive any funding.

References

- 1 Hayashi H, Abe Y, Morita Y, Nakane E, Haruna Y, Haruna T, et al. The Accuracy of a Large V Wave in the Pulmonary Capillary Wedge Pressure Waveform for Diagnosing Current Mitral Regurgitation. *Cardiology*. 2018;141(1):46–51.