Letter to the Editor

Not only the global longitudinal strain, but we can do more for the non-ST-elevation acute coronary syndrome patients by speckle tracking echocardiography☆

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Dear editor,

The article entitled "Longitudinal 2D strain can help diagnose coronary artery disease in patients with suspected non-ST-elevation acute coronary syndrome but apparent normal global and segmental systolic function" by Caspar attracted our interest [1]. Their results showed that the early detection of the coronary artery disease (CAD) or ruling out the significant coronary artery stenosis could be realized by global longitudinal strain (GLS) from speckle tracking echocardiography (STE).

Not only the GLS, but we can do more for the non-ST-elevation acute coronary syndrome (NSTE-ACS) patients by STE. As we known, the left ventricular wall comprises three myocardial layers, the endocardium, mid-myocardium and epicardium. We can get the layer specific strain by STE. All 3 myocardial layers are affected by CAD. The endocardial layer is most susceptible to ischemic injury. The greatest decrease in myocardial function, hence, occurs in the endocardial layer. And the absolute differences between endocardial and epicardial of GLS was lower in magnitude in patients with significant CAD than in those without, and the more complex of coronary lesion, the lower magnitude of the parameters [2,3].

And the global area strain (GAS) derived from 3D STE could provide more predictive endocardial information, because it coupled with both longitudinal and circumferential strain factors pertaining to the endocardium is considered to be the most sensitive to changes in myocardial function, especially in the failing heart or as a result of ischemia [4,5].

Therefore, the layer specific strain and GAS analyses might increase diagnostic accuracy in these NSTE-ACS patients.

Conflict of interest

The authors report no relationships that could be construed as a conflict of interest.

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☆ All authors take responsibility for all aspects of the reliability and freedom from bias of the data presented and their discussed interpretation.

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