
To the Editor:

We took great interest in the pilot study by Bettencourt et al1 about evaluating the additive diagnostic value of a three-dimensional (3D) whole-heart magnetic resonance coronary angiography (MRCA) integration into 1.5T Cardiovascular Magnetic Resonance–Myocardial Perfusion Imaging (MPI)/late-gadolinium–enhancement protocol for the detection of functionally significant coronary artery disease (CAD). However, the data, in spite of the limited number of patients, revealed that the integration of whole-heart noncontrast-enhanced MRCA nonsignificantly improves per-patient diagnostic accuracy. Maybe we could take another way to couple anatomic data with functional parameters to detect functionally significant CAD.

Fractional flow reserve (FFR) is an invasive, lesion-specific, and well-validated index to evaluate the severity of coronary artery stenosis. With the speed development of 3D model reconstructions of angiography data recently, the technique of noninvasive assessment of fractional flow reserve derived from coronary computed tomography angiography data could be evaluated by coronary computed tomography angiography (CCTA) and that it presents an alternative and noninvasive method for assessing coronary lesions. The Diagnosis of Ischemia-Causing Stenoses Obtained Via Noninvasive Fractional Flow Reserve (DISCOVER-FLOW) study2 demonstrated that noninvasive FFR from MRCA plus coronary CT against invasive FFR was 67%, and negative predictive value 84%. Our previous study also revealed that the integration of whole-heart noncontrast-enhanced MRCA nonsignificantly improves per-patient diagnostic accuracy. Maybe we could take another way to couple anatomic data with functional parameters to detect functionally significant CAD.

In conclusion, it is of clinical significance to evaluate the additive diagnostic value of a 3D whole-heart MRCA. We also believe that our inspired idea to investigate the incremental calculation of MRCA in FFR noninvasive measurement is of prospective value.

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Disclosures

None.

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References

Letter by Fan et al Regarding Article, "Additive Value of Magnetic Resonance Coronary Angiography in a Comprehensive Cardiac Magnetic Resonance Stress-Rest Protocol for Detection of Functionally Significant Coronary Artery Disease: A Pilot Study"

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