Clinical usefulness of instantaneous wave-free ratio for evaluation of coronary artery lesion with prior myocardial infarction

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Background: Fractional flow reserve (FFR) is a transcutaneous measurement used in the evaluation of coronary artery disease. However, its clinical usefulness remains uncertain. The purpose of this study was to evaluate the relationship between instantaneous wave-free ratio (iFR) and fractional flow reserve (FFR).

Methods: Consecutive 200 patients with stable coronary artery disease who had undergone percutaneous coronary intervention in 4 hospitals in Japan between May 2014 and July 2016 were retrospectively analyzed. Patients were divided into 2 subgroups according to the presence or absence of prior myocardial infarction (pMI). Among iFR-guided revascularization strategy, we evaluated clinical application of iFR-guided revascularization strategy with respect to the rate of major adverse cardiac events (MACE), which was defined as all-cause death, non-fatal myocardial infarction, unstable angina hospitalization, and cardiac revascularization strategy with respect to the rate of major adverse cardiac events (MACE). MACE was defined as all-cause death, non-fatal MI, unstable angina hospitalization, and coronary artery revascularization strategy. We evaluated clinical application of iFR-guided revascularization strategy with respect to the rate of major adverse cardiac events (MACE), which was defined as all-cause death, non-fatal MI, unstable angina hospitalization, and coronary artery revascularization strategy. We evaluated clinical application of iFR-guided revascularization strategy with respect to the rate of major adverse cardiac events (MACE), which was defined as all-cause death, non-fatal MI, unstable angina hospitalization, and coronary artery revascularization strategy.

Results: A total of 200 coronary artery lesions were evaluated, including 44 lesions with prior myocardial infarction (pMI). Instantaneous wave-free ratio (iFR) was a transcutaneous measurement used in the evaluation of coronary artery disease. However, its clinical usefulness remains uncertain. The purpose of this study was to evaluate the relationship between instantaneous wave-free ratio (iFR) and fractional flow reserve (FFR).

Conclusion: IFR may be useful for clinical decision-making and for prognosis even in patients with pMI.

The use of stress perfusion cardiovascular magnetic resonance imaging and fractional flow reserve in the assessment of remote artery ischaemia in patients with a chronic total occlusion

Methods: This analysis was part of a prospective observational study on FFR-guided revascularization strategy. A total of 200 coronary artery lesions were evaluated, including 44 lesions with prior myocardial infarction (pMI). Instantaneous wave-free ratio (iFR) was a transcutaneous measurement used in the evaluation of coronary artery disease. However, its clinical usefulness remains uncertain. The purpose of this study was to evaluate the relationship between instantaneous wave-free ratio (iFR) and fractional flow reserve (FFR).

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Conclusion: An iFR formula based on angiographic predictive factors was useful with high sensitivity and high NPV. A prospective validation study is necessary for the clinical relevance.