

中文題目：血流儲備分數在冠狀動脈疾病的應用

英文題目：Use of Fractional Flow Reserve in Coronary Artery Disease

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Background : Historically, assessment of the need of coronary revascularization was based on visual estimation of angiographic stenosis. However, it does not provide information regarding physiological function of myocardium. Fractional flow reserve (FFR) has been developed to improve the accuracy of evaluation of the extent of myocardial ischemia.

Method : We conducted a retrospective observational study in a medical center. Patients were enrolled from January 2012 to September 2016. We tried to compare FFR with other noninvasive cardiac testing (Thallium myocardial perfusion scan, Treadmill test, Coronary CT angiography) about the predictive value of the need of coronary revascularization.

Result : 62 patients who received examination of FFR during coronary angiography were enrolled in the study, 5 of whom lost follow-up within one year. Among 57 patients who completed follow-up for a one-year-period, 44 had $FFR > 0.8$ and 13 had $FFR \leq 0.8$. Twelve of 13 patients with $FFR \leq 0.8$ received coronary angioplasty. Among 44 patients with $FFR > 0.8$, 1 patient had Non-ST segment myocardial infarction within one year. Among 13 patients with an $FFR \leq 0.8$, no patient are found to have myocardial infarction within one year. Thirty-nine patients received noninvasive testing before coronary angiography, which all showed suspected myocardial ischemia. 21 of the above mentioned 39 patients did not underwent coronary angioplasty, all of them had $FFR > 0.8$. None of them had myocardial infarction within one year.

Discussion : The use of FFR to guide treatment for coronary artery disease had widely been established in recent years. FAME 2 Trial has shown that in patients with stable coronary artery disease and functionally significant stenoses, FFR-guided PCI plus the best available medical therapy has a better outcome as compared with the best available medical therapy alone. In our study, we tried to compare FFR with

other noninvasive tests for predicting the need of coronary angioplasty, which showed that FFR had a better predictive accuracy about myocardial ischemia.

Conclusion : Our study demonstrated that FFR had a better predictive value over other noninvasive tests (Thallium myocardial perfusion scan, Treadmill test, Coronary CT angiography) for coronary ischemia and the need of coronary revascularization.