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# Risk stratification of cardiovascular events among patients with functionally non-significant coronary stenosis

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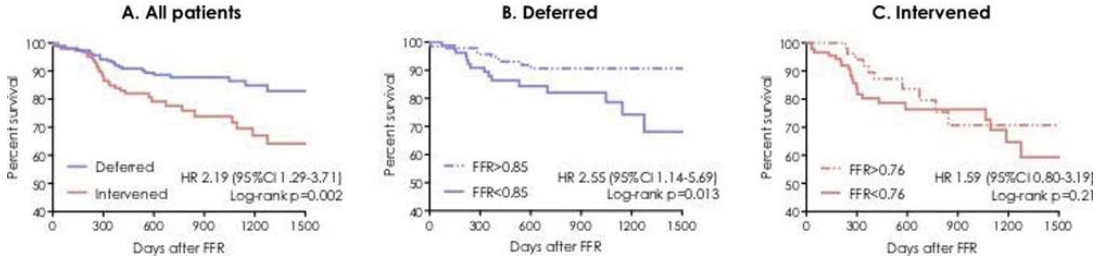
**Introduction:** Deferral of percutaneous coronary intervention (PCI) of a functionally non-significant stenosis is associated with a favorable long-term clinical prognosis. However, to date, there has been limited evidence to stratify the risk for the development of cardiovascular (CV) adverse events in patients who were deferred of PCI due to a greater fractional flow reserve (FFR) than 0.80 at the target lesion.
**Purpose:** We aimed to stratify the risk of CV events in patients with functionally significant and non-significant coronary stenosis.
**Methods:** This observational study included 458 patients who were proven angiographically intermediate coronary stenoses and were measured FFR, of whom 298 deferred patients with FFR>0.80 and 160 intervened patients with FFR<0.80. The primary endpoint was the incidence of major adverse cardiac and cerebrovascular events (MACCE) including any death, non-fatal myocardial infarction, hospitalization due to heart failure, ischemic stroke and any unplanned revascularization. ROC curve for MACCE indicated the cut-off point of FFR as 0.85 and 0.76 in deferred patients and intervened patients, respectively.
**Results:** During the observation period, 27 MACCE (9.1%) in the Deferred group, and 33 MACCE (20.6%) in Intervened group were occurred. Kaplan-Meier curves showed a higher MACCE rate in the Intervened group than Deferred group (hazard ratio (HR): 2.19, 95% confidence interval (CI): 1.29–3.71, Figure A). However, even among patients in the Deferred group, the population with "intermediate" FFR (0.81–0.85) had a significantly higher MACCE rate than those with higher FFR (>0.85) (HR 2.55, 95% CI 1.14–5.69, Figure B). This rate was comparable to that of the Intervened group at the remote phase (at 4-year: 32.0% vs. 35.8%). Conversely, in the Intervened group, there was no statistically significant difference in MACCE rate between patients with higher FFR (0.76–0.80) and those with lower FFR (<0.76) (Log-rank: p=0.21, Figure C).
**Conclusion:** The population with relatively low FFR in patients who were deferred PCI by FFR>0.80 had comparable MACCE rate to patients with FFR<0.80. Close observation after the FFR evaluation should be considered in those population.

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