Abstract

Background: Adipocyte fatty acid-binding protein (A-FABP) is expressed in both adipocytes and macrophages. Recent studies have shown that A-FABP is secreted by adipocytes and that the A-FABP concentration is associated with obesity, insulin resistance, and atherosclerosis. We have reported that the coronary atherosclerotic burden is associated with the serum A-FABP concentration. In the present study, we investigated whether the serum A-FABP concentration is associated with prognosis in patients with stable angina pectoris who have undergone percutaneous coronary intervention (PCI).

Methods: This was a prospective single-center trial. In total, 130 patients with stable angina pectoris undergoing their first PCI were enrolled from August 2008 to July 2010 at Kagawa Prefectural Central Hospital. The primary endpoints were cardiovascular death, nonfatal myocardial infarction, nonfatal stroke, revascularization, and hospitalization for heart failure.

Results: During the follow-up (median, 50 months; interquartile range, 23–66 months), 49 cardiovascular events occurred. Kaplan–Meier analysis showed that the cumulative incidence of the primary endpoints in the high A-FABP group (median A-FABP concentration of ≥18.6 ng/ml) was greater than that in the low A-FABP group. Cox analysis showed that the A-FABP concentration was an independent predictor of cardiovascular events adjusted for age and the presence of multi-vessel disease (hazard ratio, 1.03; 95% confidence interval, 1.01–1.04; p=0.01).

Conclusion: The serum A-FABP concentration is associated with prognosis in patients with stable angina undergoing PCI, suggesting that the serum A-FABP concentration could be useful for risk assessment of secondary prevention.

Trial registration: UMIN Clinical Trials Registry UMIN000029283 (registration date: September 25, 2017), retrospectively registered.

Abbreviations

A-FABP: adipocyte fatty acid-binding protein

PCI: percutaneous coronary intervention