Abstract: P4573

In patients with acute myocardial infarction, PCSK9 levels do not predict severity and recurrence of cardiovascular events

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Background: In patients with coronary artery disease (CAD), it remains unclear whether serum PCSK9 levels can predict the severity of the disease and the risk of future cardiovascular events.

Methods: Among the patients admitted for an acute myocardial infarction (MI) from September 2015 to December 2016 in an intensive care unit from a university hospital, serum PCSK9 levels were measured on admission in patients not previously receiving statin therapy. We aimed to evaluate the association between PCSK9 levels, metabolic parameters, severity of CAD on coronary angiography, and the risk of in-hospital events and at one-year follow-up.

Results: In a total of 648 patients (mean age: 66 years, 67% male), the median PCSK9 was 263 ng/ml, higher for females compared with males (270 vs 256 ng/ml, p=0.009). Serum PCSK9 was associated with LDL cholesterol (r=0.083, p=0.036), total cholesterol (r=0.136, p=0.001) and triglycerides (r=0.137, p=0.001). A positive association was also observed in the subgroup of patients with CRP >10 mg/L (p<0.001), but not with NT-proBNP, troponin and creatine kinase. PCSK9 levels were similar whatever the SYNTAX score or the number of significant coronary lesions. Moreover, PCSK9 levels were not predictive of in-hospital events (death, recurrent MI and stroke) and events (cardiovascular death, cardiovascular events, recurrent MI) at one-year follow-up.

Conclusion: In this large cohort of patients hospitalized for acute MI and not previously receiving statin therapy, PCSK9 levels was not associated with the severity or the recurrence of cardiovascular events. The clinical utility of measuring PCSK9 levels remains to be demonstrated for this category of patients.