EC1

Prognosis of Patients with Acute Coronary Syndromes with Elevated Troponin and Patent Coronaries

Planer, David[1]; Lincoff, A. Michael[2]; Moses, Jeffrey W.[3]; White, Harvey D.[4]; Dangas, George[5]; Fahy, Martin[6]; Mehran, Roxana[5]; Stone, Gregg W.[3]

[1]Hadassah - Hebrew University Medical Center, Heart Institute, Cardiovascular Research Foundation, Jerusalem, Israel; [2]Cleveland Clinic, Department of Cardiovascular Medicine, Cleveland, OH, USA; [3]Columbia University Medical Center and the Cardiovascular Research Foundation, Cardiology, New York, NY, USA; [4]Auckland City Hospital, Coronary Care & Green Lane Cardiovascular Research, Auckland, New Zealand; [5]Mount Sinai Medical Center and the Cardiovascular Research Foundation, Cardiology, New York, NY, USA; [6]Columbia University Medical Center and the Cardiovascular Research Foundation, Cardiology, New York, NY, Uzbekistan

Background: Troponin elevation is a risk factor for mortality in non ST-segment elevation acute coronary syndromes (NSTEACS). The prognosis of ACS patients with troponin elevation and non-obstructive CAD is unknown.

Methods: Patients with moderate and high-risk NSTEACS, presenting within 24 hours with ≥ 10 minutes of symptoms of unstable angina with elevated baseline troponin levels (>ULN) in the angiographic core laboratory substudy of the ACUITY trial, were stratified by the presence or absence of obstructive CAD (DS ≥50%).

Results: Of 2,442 patients with elevated troponins, 197 (8.8%) had non-obstructive CAD. Maximal diameter stenosis was 83.5±17.5 vs. 24.1%±12.2 (p<0.0001) in patients with vs. without obstructive CAD. Patients with non-obstructive CAD were younger (median age [IQR] =54 [45, 63] vs. 60 [52, 70], p<0.0001) and more frequently women (53.3% vs. 32.0%, p<0.0001), had lower rate of ST segment deviation ≥ 1mm (17.3% vs. 31.1%, P<0.0001), and lower TIMI risk score (TIMI 5-7: 10.8% vs. 28.8%, p<0.0001). Those with non-obstructive CAD had greater non-cardiac mortality at 1 month but the overall and cardiac mortality rates at 12 months were not significantly different (Figures 1,2). Conversely, recurrent MI and unplanned revascularization rates were significantly higher in patients with obstructive CAD. By multivariable analysis, a trend was present toward increased 1-year mortality in patients without compared to those with obstructive CAD (HR [95% CI] = 1.91 [0.91, 4.02], p=0.09).

Conclusions: Patients with NSTEACS and elevated troponin levels but without obstructive CAD, while having low rates of subsequent MI, are still at considerable risk for 1-year mortality from cardiac and non-cardiac causes.