



IMPACT OF PERIPROCEDURAL MYOCARDIAL BIOMARKER ELEVATION ON MORTALITY FOLLOWING PERCUTANEOUS CORONARY INTERVENTION: A POOLED PATIENT-LEVEL (N=13452) ANALYSIS OF CONTEMPORARY STENT TRIALS

Moderated Poster Contributions
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Background: Several studies have shown a strong association between post-PCI CK-MB elevation and subsequent mortality. However, the prognostic significance of troponin elevations following coronary intervention is still debated. The objective of this study was to explore the association between biomarker elevation, with CK MB or cTn, following PCI and mortality in patients undergoing PCI for stable angina with normal baseline values.

Methods: Patient-level data from 5 contemporary coronary stent trials and one large registry (LEADERS, TWENTE, DUTCH PEERS, RESOLUTE AC, PROTECT and EVENT registry) were pooled. Mortality of stable angina patients, with normal baseline biomarkers, was compared between patients with and without different cut-off values of cTn and CK MB.

Results: A total of 13452 patients were included in this pooled analysis. Most (72.7%) were male and mean age was 64.2 years; 31.3% were diabetics. The overall percentage of patients with elevated biomarkers following PCI was 23.9% for CK MB and 68.4% for cTn. Thresholds that have been proposed, with or without additional criteria, are CKMB ≥ 5 or ≥ 10 or cTn ≥ 5 , ≥ 35 and ≥ 70 . The percentages of biomarker elevation range from 0.03% to 23.7%. In the patient cohort for whom both assays were available ($n=8859$) those with both CKMB ≥ 5 and cTn ≥ 35 represent 2.4% and those with both CKMB < 5 and cTn < 35 are 92%. In patients with CKMB ≥ 5 ($n=315$), 212 (67.3%) also had cTn ≥ 35 . Conversely, the remaining 103 (32.7%) patients who also had CKMB ≥ 5 did not have cTn ≥ 35 ; and 390 (64.8%) of patients who had cTn ≥ 35 did not have CKMB ≥ 5 . A total of 259 (1.9%) patients died at 1 year; 20 (7.7%) had CKMB ≥ 5 and 23 (8.8%) had cTn ≥ 35 . In the Cox multivariate analysis, in which the highest cTn and CKMB ratios post procedure were forced into the model, only age, prior MI, lesion complexity and the highest CKMB ratio post procedure were associated with increased one year mortality.

Conclusion: Following elective PCI in stable patients treated with second generation DES, CK-MB and cTn elevations remain common. There was an increased mortality rate with elevations of CK-MB after PCI. On the other hand, cTn elevation was not independently associated with mortality.