IN PATIENTS WITH ANTERIOR ST ELEVATION MYOCARDIAL INFARCTION ST DEPRESSION IN V5 AND V6 IS A PREDICTOR OF THREE-VESSEL DISEASE

ACC Poster Contributions
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Background: In patients with ST elevation myocardial infarction (STEMI) early identification of high risk patients allows to direct them to highly experienced PCI centers. Three-vessel (3-v) disease patients are known to have a worse prognosis. Among anterior STEMI patients undergoing primary PCI, goal of this study was to investigate the correlation between ST-segment depression in inferior and lateral leads and angiographic findings, specifically searching for markers of 3-v disease.

Methods: All consecutive patients undergoing pPCI for anterior (ECG defined) STEMI in our Department in 2005-2007 (n=329 out of 716 STEMI patients) were evaluated. The first available 12-lead ECG was assessed for ST-segment elevation and depression (≥ 0.1 mV 80 ms after J point). Patients were followed for an average of >1000 days.

Results: The mean age was 62 ± 13 years, 77% were male and the average pain-to-balloon time was 5 h. The LAD was the culprit artery in 305 patients (93 %); 3-v disease was present in 71 patients (22%), who had a higher long-term mortality (29% vs 13%, p = 0.002). No correlation was found between ST depression in the inferior leads (present in 148 patients, 45%) and in D1 or aVL (present in 32 patients, 10%) and 3-v disease. On the other hand, ST depression in V5 and V6 was associated with a significantly higher risk (p < 0.001) of 3-v disease with OR of 5.5 (95% CI 2.4-12.4) and of 3.3 (95% CI 1.7-6.1), respectively. The positive predictive value relative to the presence of 3-v disease were 55% and 41% for ST depression in V5 and V6, respectively.

Conclusions: In patients with anterior STEMI the sum of ST elevation has been found to predict infarct size and short-term mortality. The present study suggests that the presence of ST-segment depression in leads V5 and V6 is a strong predictor of 3-vessel disease and may contribute to early risk stratification and to patient triage.