Prognostic Value of Lead aVR in Patients With a First Non–ST-Segment Elevation Acute Myocardial Infarction

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Background— ST-segment elevation in lead aVR has been associated with severe coronary artery lesions in patients with acute coronary syndromes, but the prognostic significance of th finding is unknown.

Methods and Results— We analyzed the initial ECG in 775 consecutive patients admitted to our center with a first acute myocardial infarction without ST-segment elevation in leads othe than aVR or V 1. The rates of in-hospital death in patients without (n=525) and with 0.05 to 0.1 mV (n=116) or 0.1 mV (n=134) of ST-segment elevation in lead aVR were 1.3%, 8.6%, and 19.4%, respectively (*P*<0.001). After adjustment for the baseline clinical predictors and for ST-segment depression on admission, the odds ratios for death in the last 2 groups were, respectively, 4.2 (95% CI, 1.5 to 12.2) and 6.6 (95% CI, 2.5 to 17.6). The rates of recurrent ischemic events and heart failure during hospital stay also increased in a stepwise fashion among the groups, whereas creatine kinase–MB levels were similar. Among the 437 patients that were catheterized within 6 months, the prevalence of left main or 3-vessel coronary arter disease in the 3 groups was 22.0%, 42.6%, and 66.3%, respectively (*P*<0.001).

Conclusions— Lead aVR contains important short-term prognostic information in patients with a first non–ST-segment elevation acute myocardial infarction. Because the poorer outcome predicted by ST-segment elevation in lead aVR seems to be related to a more severe coronary artery disease, an early invasive approach might be especially beneficial in patients presenting with this finding.

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