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 this 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 other 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 artery 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.