LEAD AVR IN STEMI DIAGNOSIS

Lead augmented vector right (aVR) is a useful measure in the diagnosis of ST-segment elevation acute myocardial infarction (STEMI), indicates a new analysis of data from the HERO-2 trial.

“Lead aVR is largely neglected in practice, despite increasing emphasis to maximize information available from the electrocardiogram (ECG) for the management of acute coronary syndromes and particularly [for] STEMI,” explains Harvey White from the HERO-2 Investigators. Previous small-scale angiographic studies have shown that aVR ST-segment elevation is associated with disease of the proximal preseptal left anterior descending artery. The relationship between elevated aVR and mortality, however, had not been investigated with a large-scale database.

White and colleagues studied a cohort of 15,825 patients with normal intraventricular conduction. As with all HERO-2-trial participants, these patients presented with acute STEMI within 6 h of symptom onset, and were receiving fibrinolytic therapy with streptokinase. ECGs had been obtained at randomization and 60 min after starting fibrinolytic therapy.

Elevated aVR was significantly associated with increased 30-day mortality among these patients, regardless of ST-segment changes in other ECG leads. This association was strong when aVR was elevated above the 1.5 mm or 1 mm cut-off points in the setting of anterior or inferior acute STEMI, respectively, with a 2.5-fold increase in 30-day mortality. Mortality was similar between patients with anterior and inferior acute STEMI. In both groups, reduction of aVR below the 1 mm cut-off point after fibrinolytic therapy was associated with lower mortality, whereas new aVR elevation above this point was linked to increased mortality.

These results may change how STEMI is diagnosed. “The concept of STEMI may need to be modified,” says White.

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Original article Wong, C.-K. *et al.* for the HERO-2 Investigators. aVR ST elevation: an important but neglected sign in ST elevation acute myocardial infarction. *Eur. Heart J.* doi:10.1093/eurheartj/ehq161