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Significance of ST-segment deviation in lead aVR for prediction of culprit artery and infarct size in acute inferior wall ST-elevation myocardial infarction

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Background: In patients with acute ST-segment elevation myocardial infarction identifying the culprit artery is either due to right coronary artery or left circumflex artery. The electrocardiogram can lead to earlier risk stratification and better guidance of therapy for reperfusion.

Patients and methods: 50 patients with acute inferior myocardial infarction were divided into two groups; Group A: Patients with ST segment depression in lead aVR ≥1 mv. Group B: Patients with isoelectric ST segment or with ST segment depression in lead aVR<1 mv. All patients were subjected to coronary angiography and echocardiograghy.

Results: Fifty patients with acute inferior myocardial infarction were included in the present study. They were 35 males (70%) and 15 females (30%), with a mean age 55.6±8.8. In group A, left circumflex artery was the culprit artery in 8 (47%) and right coronary artery was the culprit artery in 9 (53%). In group B, left circumflex artery was the culprit artery in 4 (12%) and right coronary artery was the culprit artery in 29 (88%). Patients with aVR depression had significantly larger infarctions, (estimated by peak creatine phosphokinase (CPK-MB) levels and transthoracic echocardiography) than patients without aVR depression.

Conclusion: In patients with inferior wall STEMI, ST-segment depression in aVR was more common in LCX infarcts than RCA infarcts. Patients with aVR depression had significantly larger infarctions, (estimated by peak creatine phosphokinase (CPK-MB) levels and transthoracic echocardiography) than patients without aVR depression.

Biography

Khaled Sayed Mahmoud El Maghraby has completed his M.D. at the age of 34 years from El Minia University. He is the Associate Professor of cardiology. He has published more than 26 papers in reputed journals.

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