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12 and 15 lead electrocardiograms in diagnosis of acute posterior myocardial infarction

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ECG is the mainstream investigation in the diagnosis of acute posterior myocardial infarction. It is based on the presence of ST segment depression on pericardial chest leads. However, the absence of ST on the standard 12-lead ECG in many patients with acute posterior infarction hampers the early diagnosis and thus may result in inadequate treatment. Many literatures suggest ST segment elevation in V7-V9 in 15-lead ECG can help in early diagnosis of acute posterior myocardial infarction. This study was done to determine the value of 15-lead ECG (including V7-V9) over 12-lead traditional ECG to establish the diagnosis of acute posterior infarction in patients with ischemic chest pain, and to describe the clinical and echocardiographic characteristics of these patients. Total of 140 patients was evaluated by Electrocardiography in standard 12 lead and 15 lead. The patients were categorized into group I having posterior and or associated changes and group II having without posterior changes in ECG. Echocardiography was done to evaluate the posterior wall involvement. We found 12-lead ECG is 42.5% sensitive and 93.8% specific for diagnosis of posterior myocardial infarction, whereas in case of 15-lead ECG it was 82.5% sensitive and 96.3% specific. On echocardiography, posterior wall-motion abnormality was visible in 86.4% of the patients, and 2.8% had evidence of mitral regurgitation. We can conclude 15-lead ECG is more sensitive than 12-lead ECG in diagnosis of acute posterior myocardial infarction. So, we can use it routinely to evaluate a patient with ischemic chest pain.

Biography

S. M. Tajdit Rahman is a 5th year medical student studying in Sir Salimullah Medical College, Bangladesh. He is doing his MBBS under renowned cardiologist of Bangladesh and has a fascination for research in cardiology since his early classes. He is well known in his campus as a student researcher. He is doing some researches under renowned professor and has a great achievement in extracurricular activities since his childhood. He is the President of Undergraduate Research Society in Bangladesh and has been serving as an ambassador of different student research conferences. He has attended more than 10 undergraduate research conferences.

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