



QT Dispersion as a Predictor of Coronary Lesion Severity in ST-Elevation Myocardial Infarction

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Abstract: Background: The prolonged QT interval and QT dispersion are ECG markers associated with the incidence of ventricular arrhythmias, and cardiovascular mortality in patients with acute myocardial infarction. This study aims to examine whether QT dispersion can be used as a predictor of the severity of lesions in STEMI patients in Haji Adam Malik General Hospital. **Methods:** A total of 68 patients with STEMI who undergo coronary angiography at Haji Adam Malik General Hospital since Januari 2018 until December 2018 were recruited in this cross sectional study. QT dispersion was counted from the first ECG when patient admitted at the emergency room. And then coronary angiography was done, and the Gensini score was calculated as a parameter of coronary lesion severity. **Results:** In the ROC curve analysis, the cut-off value of QT dispersion in the prediction of severe coronary lesion was 80.5 (AUC 0.874, 95% CI 0.778-0.970, $p < 0.001$). The STEMI group with QT dispersion ≥ 80.5 had a higher incidence of severe coronary lesion than the group with QT dispersion < 80.5 of 34 people (89.5%) versus 4 people (10.5%). QT dispersion ≥ 80.5 is considered to predict the severity of coronary lesion with a sensitivity of 89.5%, a specificity of 83.3%, a negative predictive value (NPV) of 86.2% and a positive predictive value (PPV) of 87.1%. **Conclusion:** QT dispersion is a simple, very useful and an inexpensive indicator which may be used as a predictor for coronary lesion severity in patients with STEMI.

Keywords: QT dispersion, Gensini Score, STEMI.

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