

Myocardial Performance Index as a Predictor of Severity of Coronary Artery Disease in Patients with Non-ST- Elevation Myocardial Infarction

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Background:

The Myocardial Performance Index (MPI/Tei Index) includes both systolic and diastolic time intervals to assess global cardiac dysfunction.

Aim and objectives:

The study aimed to determine the association between myocardial performance index and coronary artery disease severity in patients with non-ST elevation myocardial infarction (NSTEMI).

Methods:

The cross-sectional study included sixty patients with NSTEMI who underwent echocardiographic examination within twenty-four hours of initial diagnosis of NSTEMI with the measurement of MPI and then subjected to coronary angiography.

Result:

The patients were classified into 3 groups according to the degree of modified Gensini score. GS low <19 (n=16), GS mid 19-96 (n=26), GS high >96 (n=18). While the mean age was significantly higher in the high Gensini score group than in the low GS group (P=0.023). The Tei index in the high GS group was higher than in other groups (P <0.001). Isovolemic relaxation time was increased to a significant level in the high GS group (P < 0.001). Also, Ejection time was significantly decreased in the high-GS group (P < 0.001). The Tei index was positively correlated with the Gensini score ($r= 0.552$, P < 0.001).

Conclusion:

The myocardial performance index correlates well with the severity of coronary artery obstruction in non-ST-elevation myocardial infarction

Keywords:

Tei index, modified Gensini score, non-ST-elevation myocardial infarction.