**RELATION BETWEEN THE LEVEL OF RED BLOOD CELL DISTRIBUTION AND ELECTROCARDIOGRAM CHANGES AND ECHOCARDIOGRAPHIC WALL MOTION SCORE INDEX IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION**

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*Background*: Red-blood-cell Distribution Width is a part of the routine blood cell count; and, recent studies have reported a strong association between increased RDW and the risk of adverse outcomes among patients with Acute Coronary Syndrome , Acute Myocardial Infarction and Heart Failure .This study was aimed to evaluate the possible association between RDW and electrocardiographic/echocardiographic findings in patients with AMI.

*Methods*: In this analytic-descriptive study, 100 patients with AMI were enrolled in the study. On-admission RDW was measured in all participants. Electrocardiographic and echocardiographic wall motion score index and left ventricular ejection fraction in particular findings were documented by a blinded cardiologist to RDW of the patients. Possible associations between the mentioned variables and RDW were investigated.

*Results*: The mean of RDW, WMSI, and LVEF were 13.70±0.88, 1.72±0.39, and 39.85±9.19, respectively. There was not a significant correlation between the RDW and WMSI (r=0.02, P=0.83) also RDW and LVEF (r=0.03, P=0.79) were not statistically significant. There were 56 cases with mechanical complications, including 49 cases with mitral regurgitation (MR). The mean RDW was non-significantly but in a borderline manner higher in the cases with mechanical complications (13.83% vs. 13.54%; P=0.08). Similar result was seen in comparing between the cases with and without MR (with MR: 13.86%, without MR: 13.54%; P=0.06).

*Conclusion*: The RDW might be an indicator of mechanical complications including MR in AMI patients.