

# MEAN PLATELET VOLUME AND VON WILLEBRAND FACTOR AS BIOMARKERS FOR SHORT-TERM OUTCOMES AFTER PERCUTANEOUS CORONARY INTERVENTION

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**B**aseline platelet size correlates with future residual platelet reactivity. Mean platelet volume (MPV) is a rapid and simple measure in hospital and outpatient settings. An elevated MPV is a strong independent predictor of myocardial infarction (MI) after percutaneous coronary intervention (PCI). von Willebrand factor (vWF) is a useful clinical marker strongly correlating with the incidence of MI and prognosis after PCI. There is increased vWF release after PCI contributing to endothelial dysfunction and increased incidence of thrombosis and no reflow. To investigate the association between MPV and vWF and incidence of post-PCI MI, we assessed baseline MPV and pre- and post- PCI vWF antigen activity in 80 patients presented to our hospital (Mansoura specialized medical hospital) for elective PCI and then follow up of the patients was conducted for six-months period. Statistical analysis was performed using SPSS, version 21. When the six-months incidence of MI was stratified by baseline MPV, the incidence of myocardial infarction was significantly more frequent with increasing MPV (21 patients (72.4%) with high MPV had MI at six months follow up ( $p=.002$ ) with mean $\pm$ SD of baseline MPV  $14.97\pm3.76$  ( $p\leq.001$ ). When the six-months incidence of MI was stratified by vWF antigen activity (pre and post PCI), the incidence of MI was significantly more frequent with increasing vWF antigen activity (20 patients (69%) out of 29 patients (100%) with normal pre PCI vWF antigen activity that demonstrated high post PCI vWF activity had MI at six months follow up ( $p=.011$ ) with mean $\pm$ SD of vWF antigen activity  $190.45\pm38.62$  ( $p\leq.004$ ).

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