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## Relationship between mean platelet volume and type 2 diabetic patients with macrovascular complications

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**INTRODUCTION:** Antiplatelet therapy is usually considered as a cornerstone of diabetic macrovascular complications and is recommended by guidelines. Increased Mean Platelet Volume(MPV) as a marker of larger platelet size is found to be platelet hyperactivity and vascular endothelial abnormalities resulting in microvascular complications.

**OBJECTIVES:** To describe the relationship between mean platelet volume and type 2 diabetic patients with macrovascular complications.

**METHODS:** 50 cases of type 2 diabetic patients with macrovascular complications were chosen. About 3 cc of venous blood was collected in EDTA tube and sent to do complete picture (Automatic Haematological Analyzer Sysmex XS-800i, 24 parameters).

**RESULTS:** MPV was increased in 88% of type 2 diabetic patients with macrovascular complications. 76.2 % of male (16 out of 21) and 96.6% of female (28 out of 29) had high MPV. There was no significant different between MPV and age groups (P value 0.694), MPV and sex group (P value 0.059). Duration of diabetes also was not correlated with MPV. Mean MPV values among each macrovascular complications are  $10.8 \pm 1.4$  in patients with Ischemic Heart Disease,  $11.0 \pm 1.3$  in patients with cerebrovascular accident and  $11.4 \pm 1.2$  in patients with Peripheral Arterial Disease.

**CONCLUSION:** Increased MPV is strongly and independently associated with diabetic macrovascular complications. MPV measurement is a simple, cost effectiveness and might be useful in diabetic patients for primary prevention of cardiovascular disorders by monitoring MPV.