



"COMPARATIVE STUDY OF PLATELET INDICES IN DIABETICS AND NON-DIABETICS PATIENTS"

<b>Dr. Rohit Khapre</b>	SR General Medicine MGM Kamothe
<b>Dr. Nidhi Anam*</b>	Jr3 General Medicine, MGM Kamothe *Corresponding Author
<b>Dr. Amrit Kejriwal</b>	Professor And Head of Unit, MGM Kamothe

**ABSTRACT**

**Introduction:** Diabetes is characterized by increased blood glucose levels. An increase in the life span leads to a constant increase in the number of people suffering from non-communicable diseases (NCD) and diabetes is one of the most prominent disease. There is an increased risk of hematological abnormalities in the patients of diabetes mellitus. The underlying factors associated with increased cardiovascular events in diabetic patients is associated with abnormal platelet functions reflected in the altered platelet indices in these patients. **Background:** Diabetes is a chronic illness depicted by multisystem involvement. There is an association of diabetes with platelet physiology. The underlying factors associated with increased cardiovascular events in diabetic patients is associated with abnormal platelet functions reflected in the altered platelet indices. The present research is an attempt to study any correlation that exists between the platelet function, evident through platelet indices, and the glycemic control of the patient. **Material and Methods:** The study is an observational longitudinal study with double arm comparing platelet indices in diabetics and non-diabetics patients between 25 to 70 years, in which 200 subjects of which 100 cases having HbA1c <5.6% and 100 having HbA1c > 6.5% satisfying inclusion and exclusion criteria were studied. All pertinent details regarding the study population were recorded. Venous blood was collected for laboratory investigations. Data was entered in MS-Excel and analysed using SPSS. The study evaluated the differences in platelet indices between diabetics and non-diabetics and their clinical significance. **Results:** There were 130 males (65%) and 70 females. The mean age of diabetics was  $52.71 \pm 10.54$  years vs  $52.66 \pm 12.08$  years of controls. Platelet indices were significantly different in diabetics and non-diabetics. Platelet count of diabetics was  $2.48 \pm 1.01 / \text{mm}^3$  vs  $2.49 \pm 0.87 / \text{mm}^3$  in control. PDW of diabetics was  $12.74 \pm 2.5 \text{ fl}$  vs  $11.78 \pm 2.70 \text{ fl}$  in controls. MPV of Diabetics was significantly higher ( $9.15 \pm 1.22 \text{ fl}$  vs control ( $8.37 \pm 1.28 \text{ fl}$ ). In diabetics P-LCR was significantly higher ( $31.34 \pm 8.23\%$ ) vs control ( $26.83 \pm 8.44\%$ ). - Out of 100 diabetics, 48% were hypertensive vs 40% hypertensive in control group. Hypertensive diabetics had statistically significant rise in P-LCR vs those only with either diabetes or hypertension (P-value 0.01). There was a moderate to strong positive linear relationship between MPV and PDW in different age groups of diabetics and controls. Rise in MPV leads to rise in PDW. Mean haemoglobin of diabetic group was significantly lower than controls. The MCV and MCH of diabetics are significantly lower than the control group. **Conclusion** There is a clear correlation between platelet Indices and the diabetics, pronounced in the patients with increased duration and accompanying complications with the disease. Platelet indices can be used as a diagnostic tool in diabetic patients. Prognosis of the disease can be evaluated by using serial platelet indices in such patients. Increase in platelet indices suggests poor control of blood glucose and gradually increase in platelet indices leads to poor prognosis.

**KEYWORDS :**