

ABSTRACT

PROGNOSTIC SIGNIFICANCE OF MEAN PLATELET VOLUME IN PATIENTS PRESENTING WITH ST ELEVATION MYOCARDIAL INFARCTION.

(A COMPARATIVE STUDY BETWEEN DIABETICS AND NON DIABETICS)

Ischemic Heart Disease is the leading cause of mortality and morbidity in the developing world. Compared to western countries the incidence of ischemic heart disease is 10 years earlier in Indian population. Urban India has more IHD burden compared to rural India. Diabetes is another global pandemic with nearly 3.4 million diabetics in the world according to 2011 WHO report. The prevalence is expected to increase in multitudes in the upcoming years with India being the diabetic capital of the world. Despite being an independent risk factor for cardiovascular events it is found is association with other cardiovascular co morbid conditions like hypertension, dyslipidemia, atherosclerosis and other metabolic syndrome. Diabetes is now being recognised as a cardiovascular disease equivalent rather than being considered as an individual risk factor.

Various cardiovascular risk assessment and mortality predictor markers are available. Mean platelet volume measured by hemolysers assess platelet size and activity. Platelets produced in stressful conditions are large and reactive. It has been shown that diabetics too have larger and reactive platelets compared to non diabetics. This mean platelet volume measured has been shown to a good predictor of cardiovascular events in many studies.

In our study conducted in kanyakumari government medical college hospital , Asaripallam the study population includes 100 patients admitted to ICCU with STEMI within 12 hours of onset of chest pain undergoing thrombolysis with streptokinase. Both diabetics and non diabetics were enrolled. Mean Platelet Volume was measured in these patients within half an hour of admission and before the administration of antiplatelets drugs and thrombolysis, The sample was collected in EDTA bottle and was tested within half an hour to rule out sampling error. Known diabetics and patients who were diagnosed to be diabetic after admission was checked for HbA1c values for determining glycemic control. The patients were followed up for a period of 1 month and assessed for mortality and morbidity. Only patients with ST segment elevation Myocardial infarction undergoing thrombolysis with streptokinase was enrolled in this study. Patients presenting with NSTEMI and unstable angina were excluded.

The main aim and objective of our study was to compare mortality and morbidity among diabetics and non diabetics presenting with STEMI using Mean platelet Volume as an indicator.

In this study we conducted in our college with this limited study population,we found that

- MPV was higher in diabetics compared to non diabetics.
- MPV has positive correlation with overall mortality ; mortality higher with higher values of MPV.
- MPV correlated with admission hemodynamic status assessed by TIMI and KILLIP score.
- MPV had significant correlation with HbA1c values
- MPV can be used as a predictor of long term cardiovascular mortality

KEYWORDS:

Mean platelet volume, ST elevation Myocardial Infarction, diabetics, non diabetics, thrombolysis, streptokinase, TIMI score, KILLIP class, prognostic significance, glycated hemoglobin