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Study Of NT-Probnp And Conventional Markers In T2DM: Investigation Correlation Patterns

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ABSTRACT

OBJECTIVE - To find out the correlation between conventional markers in T2DM patients and NT-pro BNP

METHODOLOGY- This study was conducted in the Department of Biochemistry in association with the Department of General Medicine of SMS Medical College and Hospital Jaipur, Patients diagnosed with type 2 diabetes mellitus, visiting the outpatient department (OPD) of medicine fulfilling the inclusion criteria were enrolled for the study. 100 patients were taken for the study. The serum concentrations of NT-proBNP were determined by chemiluminescence immunoassay. The variables were analyzed on SPSS software version 16 and P≤0.05 was considered as significant.

KEYWORDS: NT-pro BNP – N-terminal pro b-type natriuretic peptide

BMI- Body Mass Index

T2DM- Type 2 diabetes mellitus

OBSERVATIONS –

Table 1- Correlation between BMI & NT- PROBNP

Correlation between BMI & NT- PROBNP

Variables	No of Cases	Pearson Correlation (r)	P Value	Significance
BMI & NT-PROBNP	100	0.398**	0.000	HS

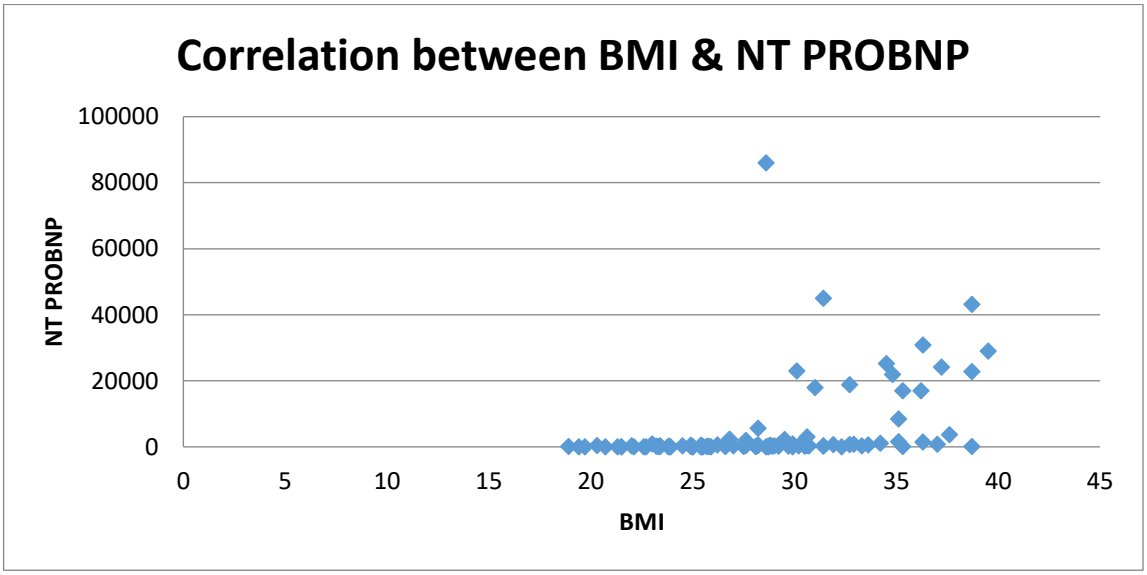


Table 2- Correlation between Diastolic BP & NT- PROBNP

Correlation between Diastolic BP & NT- PROBNP

Variables	No of Cases	Pearson Correlation (r)	P Value	Significance
Diastolic BP & NT PROBNP	100	.276**	0.005	S

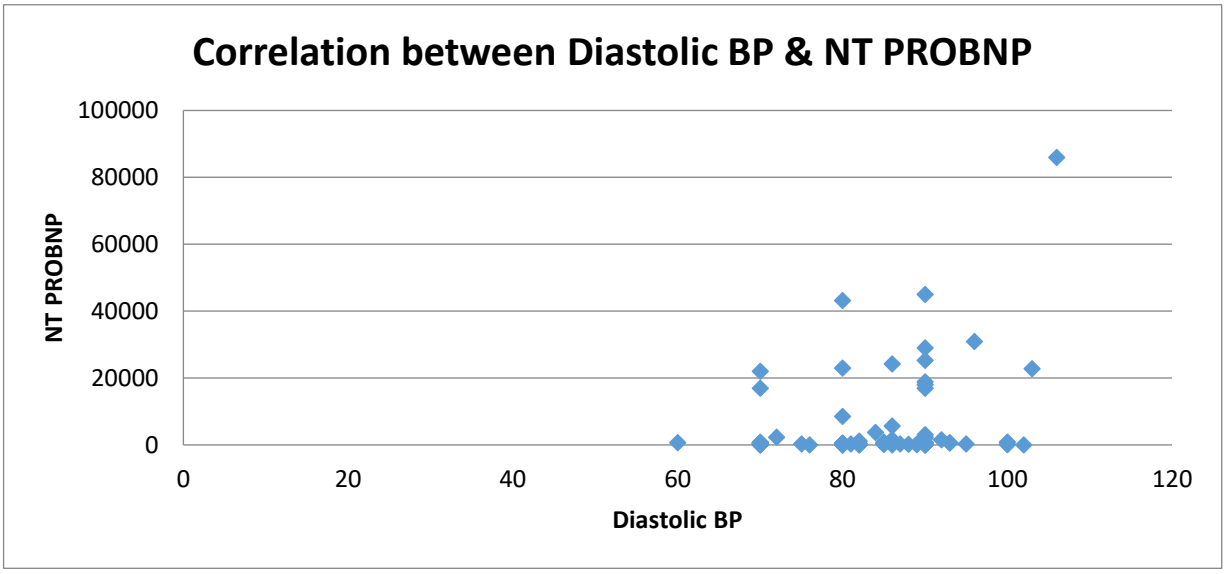


Table 3- Correlation between Systolic BP & NT- PROBNP

Correlation between Systolic BP & NT- PROBNP

Variables	No of Cases	Pearson Correlation (r)	P Value	Significance
Sistolic BP & NT PROBNP	100	0.121	0.231	NS

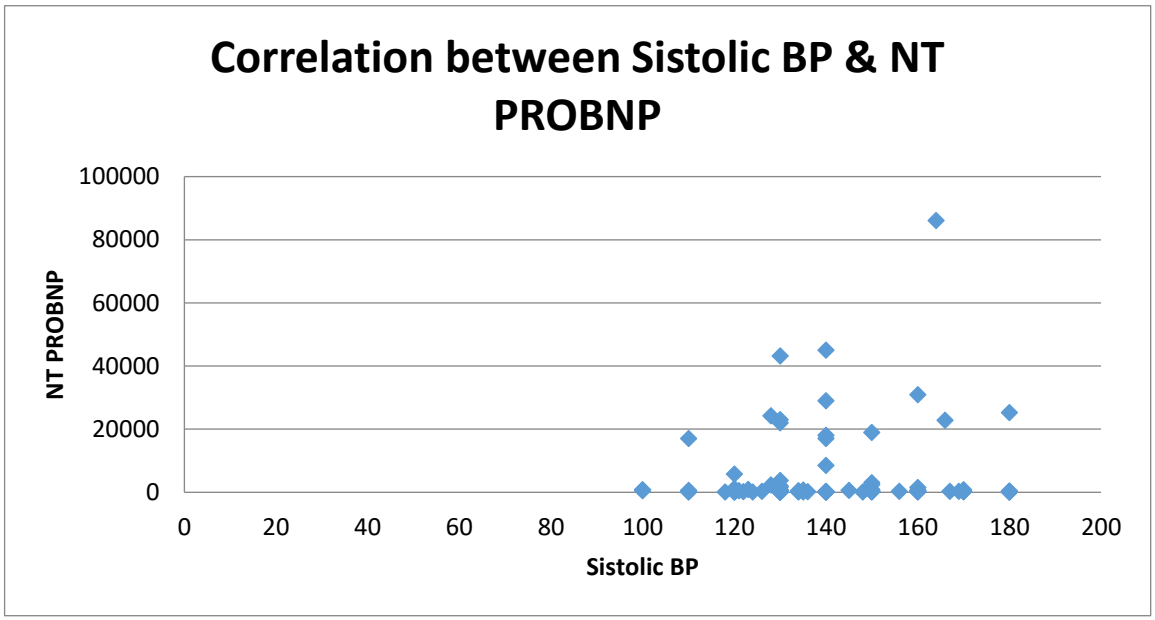


Table 4- Correlation between DURATION OF DIABETES (Yrs) & NT- PROBNP

Correlation between DURATION OF DIABETES (Yrs) & NT- PROBNP

Variables	No of Cases	Pearson Correlation (r)	P Value	Significance
DURATION OF DIABETES & NT PROBNP	100	-0.033	0.745	NS

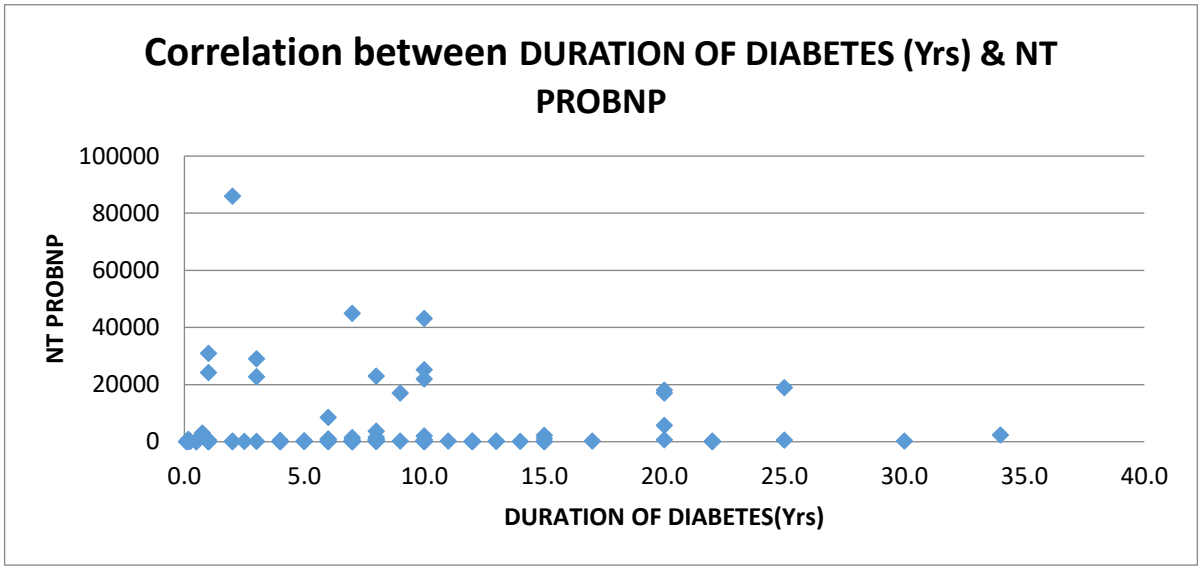
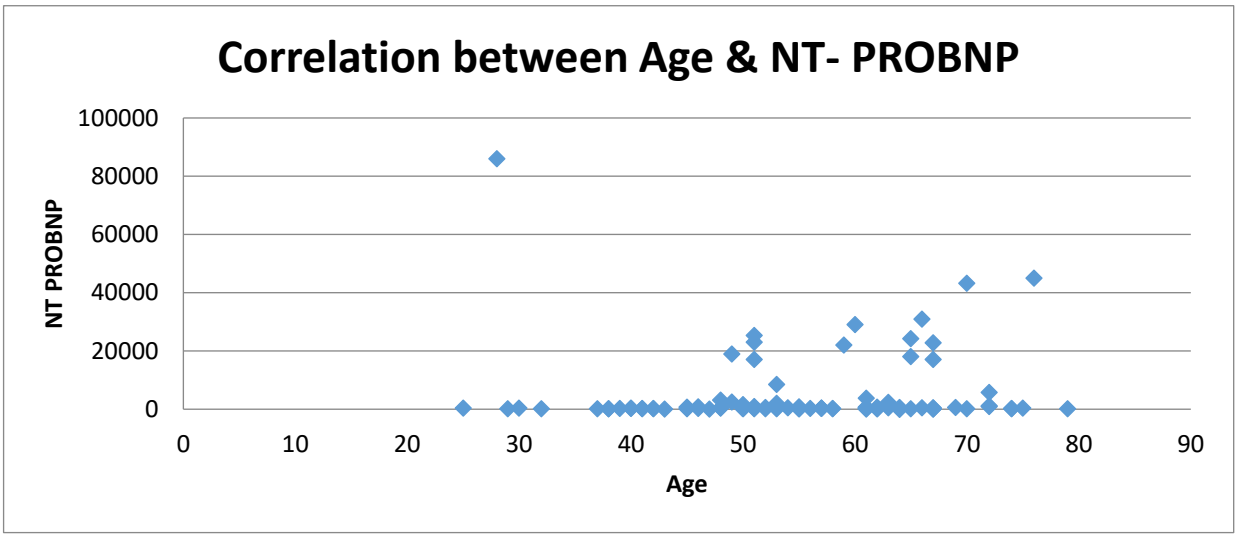


Table-5- Correlation between Age & NT- PROBNP

Correlation between Age & NT- PROBNP

Variables	No of Cases	Pearson Correlation (r)	P Value	Significance
Age & NT PROBNP	100	0.013	0.897	NS



RESULTS

In the present study it was found that NT-pro-BNP has a positive correlation with high BMI, high Diastolic BP, and high levels of NT-PRO BNP present in females.

There was a significant correlation found between Age, Duration of diabetes, Systolic BP, and NT-PRO BNPPrevalence of high NT-pro BNP was commonly observed in the age group 50-60 years. It was found that patients who had high levels of NT-pro BNP >30,000 pg/mL had Cardiovascular comorbidity within a following week/month following high levels of NT-pro BNP when followed later.

CONCLUSION-

It has been concluded that T2DM Patients with ages above 50, High BMI, More Duration of diabetes with uncontrolled sugar levels, high BP, and gender (females) are more prone to cardiovascular event risk. High levels of NT-pro BNP are associated with an increased risk of developing macrovascular complications, hence the screening methods should be applied for all previously diagnosed T2DM patients. Further research is needed to improve Diabetic Cardiomyopathy approach strategies. E.g. 2D-ECHO + phase MRI for the functional assessment of blood flow across the valves.