



Association of Left atrial volume index with N-Terminal Pro-b-Type Natriuretic Peptide Level in Heart Failure Patients with Preserved Ejection Fraction
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ABSTRACT :

Background: Heart failure is a major public health issue with a current prevalence of over 23 million worldwide. Epidemiologic studies suggest that nearly one-half of patients with heart failure have a normal ejection fraction that is now termed HFpEF. LA volume has been termed “Glycosylated hemoglobin of Diastolic dysfunction”. Natriuretic peptides are widely accepted biomarker in HFrEF patients. Now a days, it is also considered for HFpEF patients for diagnosis & prognosis purpose.

Objectives: To find out the association of Left atrial Volume index (LAVI) with N-terminal Pro B-type Natriuretic Peptide level in HFpEF patients.

Methods: Total 120 HFpEF patients were included after considering inclusion and exclusion criteria. Sample population were divided into two groups, Group –I: HFpEF patients with $LAVI \leq 34 \text{ ml/m}^2$ (n=77); Group –II: HFpEF patients with $LAVI > 34 \text{ ml/m}^2$ (n=43).

Results: In this study mean NT-pro BNP value of group-I and group-II were $284.45(\pm 24)$ pg/ml and $1673.99 (\pm 119.90)$ pg. /ml respectively. Among the Demographic & clinical parameters NYHA class, Hypertension, Diabetes mellitus was statistically significant. Among the echocardiographic parameters, LV hypertrophy, Mitral inflow E/A ratio, Deceleration time, TDI derived mitral annular e' septal velocity, E/ e' (septal) ratio, were statistically significant. Statistically significant moderately positive correlation was observed between NT-proBNP level and LAVI value, correlation coefficient ($r=0.553$, $p=0.001$). Conclusion: Elevated LAVI is associated with elevated NT-proBNP level in HFpEF patients & LAVI can be used as a marker of HFpEF.

Key Words: Heart Failure with Preserved Ejection Fraction (HFpEF), Tissue Doppler Imaging (TDI), Left Atrial Volume Index (LAVI).

Biography Dr. Md. Shamim Chowdhury has completed his MBBS from Mymensingh Medical College and Doctor of Medicine (MD) in Cardiology from Bangabandhu Sheikh Mujib Medical University (BSMMU).



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