

CORRELATION BETWEEN LEFT ATRIAL VOLUME INDEX AND PLASMA NT-PRO BNP IN ACUTE ST-ELEVATION MYOCARDIAL INFARCTION

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Aims: To study the correlation of left atrial volume index and plasma NT-proBNP level in acute ST-elevation myocardial infarction patients.

Material and Methods: Prospective observational study carried out in patients admitted to ICU of tertiary care hospital with a diagnosis of acute ST-elevation myocardial infarction. Clinical examination, electrocardiogram, laboratory investigations including plasma NT-proBNP was done. NT-proBNP was estimated using MINIVIDAS automated immunofluorescent assay. Left atrial volume was obtained by using biplane method of discs. Total of 31 patients were included in the study. 13 patients (41.9%) having LAVI > 32 ml/m² were grouped into group A and 18 patients (59.1%) having LAVI < 32 ml/m² were grouped into group B.

Results: In group A, mean age was 67.4 years, eight patients (61.5%) were male and five patients (38.4%) were female, major adverse cardiovascular events like heart failure was seen in five patients (38.4%) with NT-proBNP of 9861.8 pg/ml and pulmonary oedema was seen in eight patients (61.5%) with NT-proBNP of 5991.7 pg/ml and cardiogenic shock was seen in eight patients (61.5%) in group A with NT-proBNP of 7104.4 pg/ml and death was seen in five patients (38.4%) in group A with mean NT-pro BNP of 6483.5 pg/ml and in group B, mean age was 52.5 years, 13 patients (72.2%) were male and five patients (27.8%) were female, common risk factors was smoking in seven patients (39%) two patients (11.1%) had cardiogenic shock with mean NT-pro BNP of 3651 pg/ml. Correlation coefficient for LAVI and NT-proBNP was 0.474 and p value of 0.007.

Conclusions: There was remarkable correlation between left atrial volume index and plasma NT-proBNP levels as predictors of in-hospital major adverse cardiovascular events in acute ST-elevation myocardial infarction patients.

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