ASSESSMENT OF THE LEFT ATRIAL FUNCTION INDEX BY ECHOCARDIOGRAPHY IN THE EVALUATION OF LEFT HEART FUNCTION IN PATIENTS WITH ESSENTIAL HYPERTENSION

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Objectives To evaluate the left atrial function with the left atrial function index in patients with essential hypertension using echocardiography.

Methods Sixty hypertensive patients and 31 normal controls were selected. The high, weight, diameter of left atrium (LAD), mitral annular motion velocity (Ea, Aa) and the outflow tract velocity time integral (LVOT-VTI) were measured, and the Ea/Aa was calculated. Maximal LA volume (LAESV), left atrial ejection fraction (LAEF) were measured using the biplane method of discs, and left atrial stroke volume (LASV) and left atrial function index (LAFI) were calculated.

Results The LAFI in the hypertensive patients group was depressed when compared with normal controls (0.53±0.19 vs 0.79±0.23 respectively, p<0.05). Among hypertensive patients, the LAFI of those having the larger LAD is lower than those having the normal LAD (0.47±0.13 vs 0.58±0.13 respectively, p<0.05). A linear regression analysis showed LAFI correlated well with Ea, Ea/Aa, LAEF. LAFI negatively correlated with LAD and LASV.

Conclusions The left atrial function index depresses in hypertensive patients. It is a significant indicator in detecting the left atrial function.