الدراسات العليا

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Degree: master degree

Title of Thesis : Evaluation of Left Ventricular Functions in Diabetic Hypertensive Patients by Speckle Tracking Imaging: Correlation with Brain Natriuretic Peptide Levels

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ABSTRACT

Objectives: The study aims to assess Left Ventricular functions in patients with hypertension and/or diabetes with hypertension who have apparently preserved LV systolic function; using speckle tracking echocardiography, and correlate the findings with plasma Brain Natriuretic Peptide levels.

Methods: Twenty healthy subjects were enrolled as a control group. Sixty patients with hypertension and/or diabetes with hypertension were recruited and assembled as two equal groups, hypertension and diabetic hypertension groups. 2D-STE was performed to assess LV longitudinal strain. Plasma BNP levels were measured for all subjects.

Results: Global systolic longitudinal strain was significantly reduced in patient groups when compared to controls (P=0.05). It was more reduced in diabetic hypertensive group. There was statistically significant negative correlation with p-value <0.05 between GLS level and each of A and and E/e-, and a positive correlation with E/A ratio and e- which indicated an increase in A and E/e- and decrease in E/A and e- will associate with decrease in GLS level.

Conclusion: Conclusion: LV systolic dysfunction was found among patient groups, confirmed by the significant reduction in LV global longitudinal strain. Diabetic hypertensive group exhibited lower global strain than patients with hypertension only even though their EF showed no apparent difference.