

Role of 2d Speckle Tracking Echocardiography in Determining the Most Sensitive Predictor for Impaired Left Ventricular Systolic Function in Overweight and Obese Egyptian Females

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Aim of work:

Determine the most sensitive predictor for impaired left ventricular systolic function in overweight and obese Egyptian females using 2D speckle tracking echocardiography.

Methods:

This study was conducted on 32 healthy obese females (group I), 26 overweight females (group II) and 25 healthy females (group III) as a control group. All of them underwent clinical examination including calculation of BMI and measuring waist circumference. 2D LVGLS was measured using 2D speckle tracking echo (2D STE). Stepwise multivariate regression analysis was used to determine the strongest predictor for impaired 2D-LVGLS including BMI, BSA and waist circumference as independent variables.

Results:

group I had significantly lower 2D LVGLS than group II and group III. Using stepwise regression analysis waist circumference was the strongest predictor for LVGLS impairment; $\beta = 0.5$; 95% confidence interval (CI): 0.06 to 0.15 and p value < 0.001 .

Conclusion:

Isolated obesity and overweight are independent factors for impaired LV systolic function. Waist circumference is a more sensitive predictor for impaired LV systolic function than BMI. 2D STE is a good echo modality to detect subclinical LV systolic dysfunction.