SUMMARY & CONCLUSIONS

This study included 25 normotensive child with simple obesity with age ranging from 3 to 15 years and a control group fixed figures .The studied cases were subjected to a thorough history taking and clinical examination and anthropometric assessment that included weight measurement and Height estimation .Also subscapular and triceps skin fold thickness were measured .

B.M.I was estimated as following

$$B.M.I = \frac{\text{weight}}{(\text{Height})^2}$$ (Kono et al 1994)

Obesity index was estimated as following

$$O.I = \frac{\text{Measured body weight}}{\text{Standard body weight}}$$ (Kono et al 1994)

Echocardiographic examination was performed to each subject in the Cardiology Clinic Cairo University Pediatric Hospital .

The laborabtory investigation included serum level of cortison 8H A.M and 8H P.M and serum level cortison after suppression and serum level of cholesterol , triglyceride , high density lipoprotoin , low density lipoportein . The purpose of this study was to evaluate the effect of obesity on the function and structural parameters of the heart in normotensive simple obese children attending the Diabetic Endocrine Metabolic Pediatric Unit of Cairo University Children Hospital .

In this study we found that L.V.M , L.A , AO , RV , LVEDD , LVESD , IVS (D) , LVPW (D) were significantly higher in obese group in

comparison with control group . But PA, SV, FS , EF were significantly lower in obese group in comparison to control group .

Conclusion :

From this study, it is concluded that the obesity is significantly correlated with an increase in the left ventricular mass even after controlling for age and blood pressure . The increase in left ventricular mass associated with increasing adiposity reflects increase in both left ventricular wall thickness and left ventricular internal dimension .

Recommendations :

Pediatricians should recognize that obesity affects the left ventricular mass and goemetry in children as young as 6 years of age and should make parents aware of this finding and other potantial implicaions to persuade them to seek treatment for obesity for their obese children .Further studies should be performed to detect the effect of weight reduction on echocardiographic findings in obese children .

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