P-98

Left ventricular systolic and diastolic function in children with overweight and obesity

Jurko A jr.(2), Schusterová I. (1), Jurko A. (2)
Eastern Slovakian Institute of Cardiovascular Diseases, Košice, Slovakia (1)
Pediatric Cardiology Clinic, Martin, Slovakia (2)

Objective: Many studies have proven the relation between obesity and heart failure. The purpose of our study was to identify the influence of the severity of obesity in children on structural and functional changes of the left ventricle and parameters of the systolic and diastolic function.
Design: Prospective controlled study. 21 children with overweight and obesity and 23 healthy controls.
Subjects: Following parameters have been evaluated: nutritional status, intermitent and continuous ambulatory blood pressure monitoring, echocardiograpgic examination including aortal root diameter, left atrial diameter, interventricular septum thickness, left ventricular end-diastolic diameter, left ventricular end-systolic diameter, left ventricular posterior wall thickness, left ventricle mass, relative wall thickness, left ventricular mass/height index and ejection fraction.
Results: In overweihgt and obese children, systolic blood pressure, diastolic blood pressure, average day-time SBP were higher than in controls. Left ventricular size and function parameters were also increased in overweight children. There was diastolic dysfunction with preserved systolic function in study group.
Conclusions: In our study we have found, that in obese and overweight children signs of early myocardial damage, both structural and functional, are detectable mainly as the alteration of the left ventricular diastolic function, despite preserved global systolic function. These changes seems to be intensified by the severity of obesity.