
Non-invasive evaluation of some cardiac functions in cases of systemic hypertension

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Systemic hypertension is a major cardiovascular risk factor. There are multiple cardiovascular complications of sustained increased arterial blood pressure, including cardiac enlargement, accelerated atherosclerosis, coronary artery disease, and congestive heart failure. The multiple cardiac manifestation of hypertension seen in adulthood may, in fact, have their beginning in the pediatric population. The aim of this work is to evaluate the cardiac functions and if present, cardiac abnormalities using non-invasive techniques in a group of children with hypertension of different etiologies to enable more accurate prediction of the course and outcome of these patients. The present work included 25 hypertensive patients of different etiologies and 10 healthy children as normal controls. All patients and controls were subjected to thorough clinical laboratory, electrocardiographic and echocardiographic examinations. M-mode echocardiography was used to assess structure of the heart and Doppler echocardiography was used to evaluate the functions of the heart. Concerning the structural changes we found that LV posterior wall thickness was increased in hypertensive patients.