Clinical value of Doppler tissue imaging in detection of preclinical myocardial affection in ß thalassemia major patients.

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Background: Cardiac complications are the major cause of death in ß thalassemia major patients. Earlier diagnosis and proper treatment of cardiac dysfunction help to reduce mortality and improve survival. Results of Doppler echocardiographic evaluation of diastolic function in such patients were controversial.

Aim of the work: We evaluated the clinical value of pulses wave Doppler tissue imaging (PWD-TI) in detection of preclinical changes in diastolic function in asymptomatic ß thalassemia major patients.

Patients and Methods: Fifty asymptomatic ß thalassemia major patients with ejec- tion fraction (EF) > 50% were selected with 20 age and sex comparable healthy control subjects. From M mode echocardiography we measured left ventricular (LV) end-diastolic diameter (LVEDD) , end systolic diameter (LVEDS) , EF, fractional fiber shortening (FS), interventricular septal (IVS) and posterior wall thickness (PWT), LV mass (LMV), LV mass index (LVMI) and left atrial diameter. From Doppler mitral flow pattern (MFP), we measured peak E, A, E/A ratio, E wave deceleration time (E wave DT), and isovolumetric relaxation time (IVRT). Results of Doppler echocardiographic evaluation of diastolic function in such patients were controversial.

Conclusions: Pulsed wave Doppler tissue imaging proved to be a good tool for assessment and detection of preclinical myocardial affection in ß thalassemia major patients. It offered a good bedside noninvasive diagnostic tool for better understanding of the nature of the mechanical and hemodynamic abnormalities underlying the previous controversial results of echo-Doppler assessment of MFP in such patients.