Summary

Rheumatic fever is the most common cause of acquired heart disease among children and young adults worldwide. This study was undertaken to evaluate the left ventricular diastolic function among children with acute rheumatic fever. 30 children with acute rheumatic fever who presented to cardiology outpatient clinic or admitted in wards of Benha University Pediatric Department. Their ages ranged from 6 to 15 years. They were 17 males (56.7%) and 13 females(43.3%).

Patients divided into 2 groups:

Group I: included 10 children who had acute rheumatic fever without clinical evidence of carditis.

Group II: included 20 children who had carditis.

Two groups of control subjects were enrolled in this study:

Control group A: consisted of 10 healthy children free of any disease matched in age with group I patients.

Control group B: consisted of 10 children with chronic quiescent RHD without clinical evidence of activity and matched with group II patients in severity of valvular regurgitation.

All patients were subjected to thorough history taking, complete physical examination and laboratory investigation in the form of complete blood count, ESR, CRP, and ASO Titre .

Echocardiography and Doppler studies were performed for all patients as well as control groups.

The results showed that group I patients without clinical carditis had mitral valve thickening in 3 of them (30%),and mild MR in 4 of them (40%). All had normal systolic function (normal FS).

There was no significant difference in LV diastolic function in this group of patients as compared to the normal control group except in IVRT which was significantly prolonged in patient group ($P<0.05$).

Echocardiographic study of group II patients with active carditis showed mitral valve thickening in 11 of them (55%), mitral valve prolapse in 4 cases (20%), Doppler study showed mild MR in 11of them (55%), and AR in 5 cases (25%).

systolic function was normal in all cases except 5 cases (25%) who had mildly depressed FS and all of them had mild mitral regurge.

Diastolic function indices of this group of patients were significantly impaired in comparison with control group (quiscent RHD). E velocity and E/A ratio were significantly lower in patient group while DT and IVRT were significantly prolonged ($P<0.05$).