**OBJECTIVES**

- This study was designed to investigate the effects of recombinant human growth hormone (rhGH) therapy on myocardial geometry and functions in children with idiopathic isolated growth hormone deficiency (GHD) by conventional echocardiography and tissue Doppler imaging (TDI).

**METHODS**

- Thirty patients (19 boys and 11 girls) with a diagnosis of idiopathic isolated GHD between December 2010 and July 2011 were enrolled in this study.
- The mean age of patients were 11.0 ± 2.6 (6.3 - 15.5) years.
- At baseline, 3rd, 6th and 12th month of treatment, the structure of left ventricle (LV) was assessed by conventional echocardiography, and myocardial rates and time intervals were assessed by TDI.
- By using these data; LV mass index (LVMI) by two different methods (LVMI1: g/m2 and LVMI2: g/m2.7), relative wall thickness [RWT: (IVSd+LVPWd)/LVDd] and myocardial performance index (MPI: ICT+IRT/ET) for LV, IVS and RV were calculated.
- Patients with co-morbidities and taking any other medication were excluded.

**RESULTS**

- There were no significant differences for left ventricle ejection fraction (EF), fractional shortening (FS), mitral valvular E/A and deceleration time (DT) at 3th, 6th and 12th months according to baseline.
- There were significant increases in LVM1, LVM2 and RWT at 3th, 6th and 12th month according to baseline (Table 1).
- The differences were significant for both LVM1 and LVM2 after 6th month, and for RWT at 12th month.
- There were no significant differences for MPI at LV, IVS and RV at 3th, 6th and 12th month according to baseline (Table 2).

**REFERENCES**