

## **Left Ventricular Functions are Affected in Patients with Familial Mediterranean**

### **Fever**

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**Objectives :** Familial Mediterranean fever (FMF) is an autosomal recessive disease that is prevalent among populations surrounding the Mediterranean Sea. The aim of this study was to assess early changes in regional and/or global systolic or diastolic myocardial functions of FMF patients without any cardiovascular symptoms using tissue dopplerechocardiography (TDE) and strain and strain rate echocardiography, and to compare them with the results of the control group.

**Methods:** This study was performed between May 2012 – September 2012 at Pediatric Cardiology department of Dr Sami Ulus Obstetrics and Children Health and Diseases Training and Research Hospital. 45 patients with diagnosis of FMF and followed-up by Pediatric Nephrology Clinic were included.

**Results:** Among 45 patients with FMF, 24 (55.3%) were female and 21 (46.7%) were male, and age of them varied 2-18 years (mean  $11.3 \pm 3.7$  years). There was no significant difference in terms of age, gender, height and weight between patient and control groups ( $p > 0.05$ ). Mean disease durations were  $4.6 \pm 2.4$  years (range 6 months-10 years). In the patient group, homozygote M694V mutation was most common (64.4%) mutation type. All of the patients were using colchicine therapy. Mitral valve early filling velocity wave was higher in patients than the control group ( $p < 0.05$ ). Sm wave of septal mitral annulus was lower in the patient group than the control group ( $p < 0.05$ ). Septal MPI was higher in the patients than the control group ( $p < 0.05$ ). Septal mitral annular IVCT and Am wave was lower in the patient group than the control group ( $p < 0.05$ ). Patients with FMF were found to have statistically lower longitudinal global strain (GS), radial GS and strain rates ( $\% -14.44 \pm 4.77$ ,  $\% 14.80 \pm 6.29$  and  $0.59 \pm 0.24$  s respectively) than those of the controls ( $\% -17.40 \pm 1.79$ ,  $\% 17.53 \pm 4.63$ ,  $0.83 \pm 0.51$  s-) ( $p < 0.05$ ). Circumferential GS did not differ significantly between groups.

**Conclusions:** As a result, subclinical FMF patients with normal cardiac functions may have normal left ventricular function measured with conventional echocardiography, myocardial tissue were affected because of the disease (FMF), and this patients should be follow-up because of this situation.