

Table

	After regular sleep	After sleep deprivation	p
LVEDV (ml)	83.82 ± 15.02	82.28 ± 17.49	0.536
LVESV (ml)	29.01 ± 9.37	28.30 ± 7.00	0.674
LVEF (%)	65.80 ± 6.46	64.96 ± 3.89	0.616
LAV max (ml)	31.17 ± 7.66	31.36 ± 6.58	0.902
LAVI max (ml/m2)	16.97 ± 3.85	16.96 ± 2.98	0.991
LAV min (ml)	12.44 ± 4.12	13.47 ± 4.49	0.221
LAVI min (ml/m2)	6.74 ± 2.08	7.32 ± 2.12	0.228
LAV pre_a (ml)	21.16 ± 5.24	23.86 ± 5.98	0.058
LAVI pre_a (ml/m2)	11.51 ± 2.64	12.90 ± 2.92	0.071
LAEV (ml)	18.73 ± 5.23	17.88 ± 4.79	0.494
LAEF (%)	60.04 ± 9.29	57.22 ± 10.20	0.184
pas LAEV (ml)	10.00 ± 3.95	7.49 ± 2.73	0.014
pas LAEF (%)	31.49 ± 7.75	24.10 ± 7.66	0.006
act LAEV (ml)	8.72 ± 2.96	10.39 ± 4.57	0.086
act LAEF (%)	78.10 ± 35.98	86.47 ± 42.77	0.321
LAexp	163.07 ± 59.28	146.41 ± 56.42	0.246

LVEDV; left ventricular end-diastolic volume, LVESV; left ventricular end-systolic volume, LVEF; left ventricular ejection fraction, LAV; left atrial volume, LAVI; left atrial volume index, max; maximum, min; minimum, pre_a; pre atrial ejection, LAEV; left atrial ejection volume, LAEF; left atrial ejection fraction, pas; passive, act; active, LAexp; left atrial expansion

function and LA active EF were not significant. Left atrial passive EF of the individuals after night shift was significantly lower (31.49 ± 7.75 vs. 24.10 ± 7.66 ; %95CI 2.35 – 12.43; $p = 0.006$).

Conclusion: Acute SD is associated with a reduction in LA passive emptying function in healthy adults. Although entire conventional indices of diastolic function did not support, 3D derived indices were sufficient to show subclinical diastolic dysfunction according to impairment in passive phase of left atrial ejection. Prospective large scale studies needed to enlight this issue.

OP-173

Evaluation of the Torsion and Twist Mechanics of the Left Ventricle in Patients with Systemic Lupus

Erythematosus. *Rezzan DENİZ ACAR¹, Mustafa Bulut¹, Şenay Arıkan Durmaz², Serdar Fidan¹, Servet İzci¹, Mahmut Yesin¹, Süleyman Çağan Efe¹, Mustafa Akçakoyun¹.* ¹Department of Cardiology, Kartal Kosuyolu Education and Research Hospital, Istanbul, Turkey; ²Department of Internal Medicine, Bilim University, Istanbul, Turkey.

Objective: Myocardial involvement in systemic lupus erythematosus (SLE) has a great importance. Therefore, the aim of this study is to evaluate the rotation and twisting mechanics of the left ventricle (LV) in patients with SLE.

Methods: Forty -three patients fulfilled at least four of the American College of Rheumatology criteria for SLE with systemic lupus erythematosus (SLE) and thirty individuals as a control group were enrolled the study. LV ejection fraction was calculated by biplane Simpson's method. Measurement of strain and rotational parameters was performed offline.

Results: The values of mean global longitudinal strain (GLS), global circumferential strain (GCS) basal, mean radial strain (RS) basal and GCS apical were significantly lower in SLE patients when compared with normal myocardium in the control group. (-20.0 ± 3.0 vs. -22.4 ± 3.1 , $p = 0.002$, -15.3 ± 5.1 vs. -20.3 ± 3.6 , $p < 0.001$, 40.7 ± 19.4 vs. 51.5 ± 15.8 , $p = 0.015$, -25.0 ± 7.8 vs.

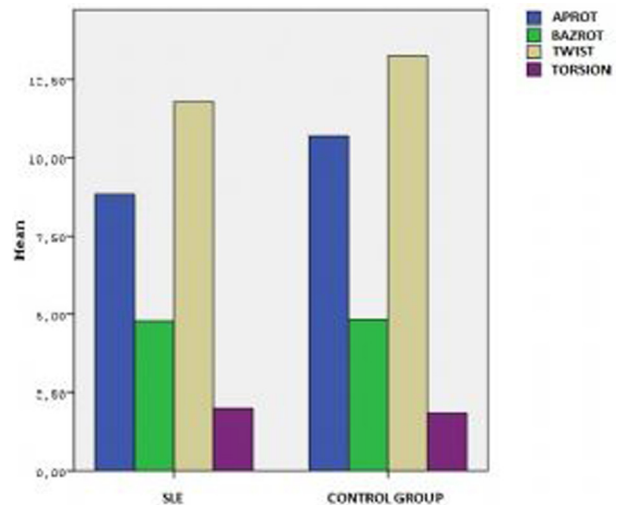


Figure.

-28.8 ± 5.5 , $p = 0.030$, respectively. The difference between basal rotation, apical rotation, twist and torsion of the left ventricle in SLE patients and the control group were not significant (11.7 ± 6.4 vs. 13.2 ± 6.4 , $p = 0.366$, 1.8 ± 0.8 vs. 1.9 ± 2.3 , $p = 0.725$, respectively). There was not any significant relationship between SELENA-SLEDAI score and myocardial strain analyses and twist mechanics of the left ventricle in patients with SLE.

Conclusion: LV torsion and twist mechanics were preserved but the segmental and global strain analyses were depressed in SLE patients with globally normal LVEF.

OP-174

The Importance of Speckle Tracking Echocardiography in the Early Detection of Left Ventricular Dysfunction in Patients with Polycystic Ovary Syndrome.

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Objective: Polycystic ovary syndrome (PCOS) is characterised by hormonal and metabolic abnormalities, and is thought to increase cardiovascular disease risk. This study used speckle tracking echocardiography (STE) to evaluate left ventricular (LV) dysfunction at an early period in the disease.

Methods: The study enrolled 31 PCOS patients and 32 healthy volunteers as a control group. The participants' ages ranged between 18 and 40 years. PCOS was diagnosed according to the Rotterdam criteria. LV strain (S) and strain rate (SR) were evaluated using apical two- (2C), three- (3C), and four-chamber (4C) imaging. Global S and SR were calculated by averaging the three apical views.

Results: The waist-to-hip ratio, HOMA-IR (homeostasis model assessment-insulin resistance), and fasting insulin and triglyceride levels were higher in the PCOS group than in the controls ($P = 0.001$, $P = 0.001$, $P = 0.001$, and $P = 0.005$, respectively). In the PCOS group, the mitral A wave, deceleration time (DT), and isovolumetric relaxation time (IVRT) were significantly higher than in the controls (all $P < 0.05$). The LV global longitudinal strain (LV-GLS) and global