

Corevalve, 2 patients needed second valve because of valve dislodgement. When compared with preprocedural results, left ventricular ejection fraction (LVEF), maximal and mean aortic gradients, and pulmonary arterial pressures (PAP) after TAVI were reduced significantly; in addition to these, the degree of mitral and aortic regurgitations were also significantly reduced after TAVI (Table 2).

**Conclusion:** TAVI has been a reliable treatment to high risk patients for aortic valve surgery with low incidence of complications, and high success rates. Our study demonstrated that the echocardiographic parameters improved significantly after TAVI in a one month period, however, these changes seems to be changed independently from the type of the devices.

**Table 1. Demographics and baseline characteristics**

	TAVI (n=36)
Age (years)	78,5 ± 7,6
Sex (M)	16 (44,4)
HT (%)	30 (83,3)
DM (%)	9 (25)
COPD (%)	18 (50)
PVD (%)	11 (30,6)
CABG (%)	9 (25)
Logistic Euroscore	36,4 ± 14,3
Euroscore II	10,2 ± 6,0
STS score	7,9 ± 6,2

HT=Hypertension; DM=Diabetes Mellitus; COPD=Chronic Obstructive Pulmonary Disease; PVD=Peripheral Vascular Disease; CABG=Coronary Artery Bypass Graft

**Table 2. Baseline and post TAVI echocardiographic measurements**

	Baseline	Post TAVI	p
LVEF	50,2±12,7	55,7±9,6	<0.001
LVEDD (cm)	3,19±0,8	3,1±0,6	0.08
LVEDD (cm)	4,8±0,7	4,7±0,7	0.09
IVS (cm)	1,53±0,2	1,5±0,2	0.17
Peak AV gradient (mm Hg)	75,7±14,3	17,2±6,6	<0.001
Mean AV gradient (mm Hg)	49,3±8,8	8,6±3,6	<0.001
PAP (mm Hg)	44,9±12,6	34,9±11,5	<0.001
MR	1,8±0,8	1,2±0,7	<0.001
AR	1,2±0,5	0,6±0,7	0.001

LVEF=Left Ventricular Ejection Fraction, LVEDD= Left Ventricular End Systolic Diameter; LVEDD= Left Ventricular End Diastolic Diameter; IVS= Interventricular Septum; AV=Aortic Valve; PAP=Pulmonary Arterial Pressure; MR=Mitral Regurgitation; AR=Aortic Regurgitation

## PP-405

### Valve Sparing Aortic Root Re-implantation (David V Procedure): Early and Midterms Results of Our Clinic

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**Introduction:** Replacement procedures in patients with aortic root dilatation became more important with increasing information about the dynamic nature and physiology of the aortic root. Especially, valve sparing aortic root replacement and reimplantation procedures are more preferred in normal valve function. In our study, we evaluated early and mid term results in patient with valve sparing aortic root reimplantation.

**Methods:** 29 patients with aortic root aneurysm were included to our study between April 2009 and December 2012. Average age was 58.3±12.8 (30-79) years. 21 (72.5%) patient were male and 8 (27.5%) patients were female. David V procedure was performed in patients. Native aortic valve was kept in 19 patient because of normal structure and function. Aortic valve was repaired in 9 patients. Stentless bioprosthetic aortic valve was replaced to an elderly patient due to degenerative aortic valve regurgitation. In addition that coronary artery bypass grafting was performed in 9 patients and mitral valve repair was performed in one patient.

**Results:** There was no operative mortality. One patient died due to renal and respiratory failure and one patient died due to myocardial stunning in early term. Aortic valve function is normally in 26 (89.6%) patients (≤1° regurgitation) in the early postoperative period. 2nd degree of aortic regurgitation was detected in 3 (10.4%) patients. There was no mortality postoperative late period. Aortic reoperation was not required due to procedural failure in the late period.

**Conclusions:** Valve sparing aortic root reimplantation improves quality of life in patients. Patients are kept from complication of mechanical valve and anticoagulant

therapy. If necessary to replace the aortic valve in elderly patient, the stentless biological aortic valve can be used in these patients. So left ventricular outflow tract gradient can be reduced and left ventricular function can be kept. Therefore may avoided from complications of anticoagulant therapy in these patients.

## PP-406

### Utility of Speckle Tracking Echocardiography in Asymptomatic Mild to Moderate Aortic Stenosis at Rest and During Supine Bicycle Exercise Test

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**Purpose:** Although it is known that left ventricular function is impaired in subjects with severe aortic stenosis (AS), it is unclear whether the same is true in patients with in asymptomatic mild to moderate AS. In the present study, we aimed to evaluate the utility of speckle tracking echocardiography (STE) in asymptomatic mild to moderate aortic stenosis at rest and during supine bicycle exercise test which has not been studied previously.

**Methods:** The study sample consists of 25 patients with asymptomatic mild to moderate AS and 13 healthy controls. All patients underwent detailed echocardiographic evaluation at rest and during supine bicycle exercise test. Left ventricular functions were evaluated with two dimensional STE at rest and during peak exercise. Additionally C-reactive protein (CRP), brain natriuretic peptide (BNP) and troponin values of the groups were recorded.

**Results:** Conventional echocardiographic parameters were similar between groups (ejection fraction, pulmonary artery pressure, heart chamber diameters). Aortic velocity was significantly higher (2.1 m/s vs 1.3 m/s, p=0.001) in the group with AS and the difference increased at peak exercise (2.7 m/s vs 1.7 m/s, p<0.001). Left ventricular global longitudinal strain (GLS) was not only significantly lower in the group with AS (18.6±2.7 vs 21.2±2.8, p=0.034) when compared with the control group but also the difference became more pronounced during peak exercise (18.1±2.7 vs 23.8±2.3, p<0.001). Resting GLS inversely correlated with BNP (p:0.033, r:-0.419), CRP (p:0.014, r:-0.474), troponin (p:0.009, r:-0.505). Peak exercise GLS demonstrated better correlation with BNP, CRP and troponin (p:0.010, r:-0.496; p:0.004, r:-0.547; p:0.001, r:-0.633 respectively). Peak exercise GLS (p:0.035, r:-0.415) but not resting GLS correlated with aortic velocity.

**Conclusion:** Despite normal left ventricular ejection fraction, GLS is not only significantly decreased in patients with asymptomatic mild to moderate AS but also the difference is more pronounced during peak exercise. Results of the present study suggest that STE is a reliable tool in early detection on left ventricular involvement in mild to moderate AS.

## PP-407

### Increased Frequency of Mitral Valve Prolapse in Patients with Nasal Septum Deviation

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**Aim:** Mitral valve prolapse (MVP) is a valvular heart disease which is closely associated with generalized disorder or disarray of collagen. So it is frequently observed in patients with Marfan's syndrome, Ehler Danlos, or Benign Joint Hypermobile Syndrome. Nasal septum has two components; osseous and collagenous septums which were mainly composed of type II collagen. Nasal septum deviation may produce anatomically obstruction of nasal passage and also symptoms e.g. dyspnea with varying degree. We aimed to evaluate the frequency of MVP in subjects with NSD and its association with the type of nasal septum deviation.

**Material-Method:** Echocardiographic examination was performed in patients with NSD and normal nasal passage. Features of mitral valve; thickness of anterior leaflet, presence of prolapsing leaflet (anterior, posterior bileaflet), coexistence of mitral regurgitation (none, trivial, and mild) were recorded and compared according to type of deviation of nasal septum (type I-VI).

**Results:** Totally, 74 patients with NSD and 38 subjects with normal nasal passage were enrolled to the study. Presence of MVP was significantly higher in patients with NSD compared to normal subjects (%63 vs. %26, p<0.001). Prolapse of anterior, posterior and both leaflets was higher in patients with NSD. Thickness of anterior mitral leaflet was significantly increased in patients with NSD (3.57±0.68 vs 4.59±1.1 mm, p<0.001) compared to normal subjects. Type I, II, and III, IV were higher in frequency in patients with MVP while Type V and VI were higher in normal subjects.

**Conclusion:** Increased thickness of Mitral anterior leaflet represents the myxomatous degeneration which was closely associated with abnormality of collagen and proteoglycan content. NSD is found to be associated with the presence of MVP and also increased thickness of Mitral anterior leaflet. Co-existence of both those pathologies may be due to abnormality of collagen and proteoglycan content which were highly present in the structure of both mitral valves and nasal septum, especially the cartilaginous septum. Also co-existence of NSD and MVP may contribute and exaggerate the symptoms of patients with MVP probably due to reduced nasal passage and airflow.