effects of transcatheter aortic valve implantation (TAVI) in P wave dispersion (PWD), immediately after aortic valvuloplasty and prosthesis deployment.
Methods -Results: This single-center study consisted of 32 patients with severe AS (23 females and 9 males, aged 76.4±6.9 years, with a mean aortic gradient of 51.9±8.9 mmHg) who underwent successful TAVI without complication. A comprehensive electrocardiographic study was performed before and 24 hours after TAVI. Electrocardiographic and echocardiographic parameters after TAVI were compared with previous values. PWD values before the procedure were correlated with the mean aortic valve gradient (r:0.396, p:0.025). After the procedure, the PWD values were significantly smaller than before operation (59,5±14,1 vs 51,9±12, p:0,005).
Conclusions: This is the first study describing improvement of PWD after TAVI. Our results show TAVI provides reduction in the risk of AF, as well as the hemodynamic benefits

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Frequency of Fragmented QRS in Patients with Severe Aortic Valve Stenosis

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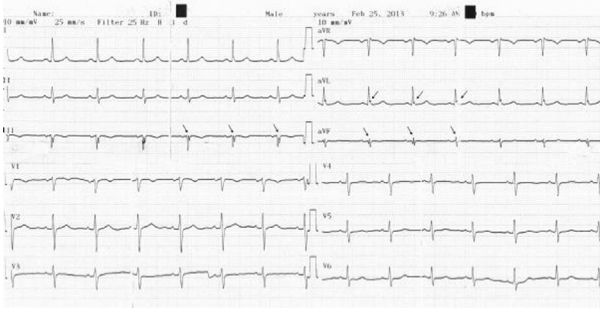
Background: Several studies indicate that the quantitative assessment of myocardial fibrosis has the potential to provide additional prognostic information in the evaluation of patients with severe aortic valve stenosis. Recently, fragmented QRS is considered to reflect myocardial fibrosis.
Aım: In present study, we aimed to investigate the presence and frequency of myocardial fibrosis determined by fragmented QRS in patients with severe aortic valve stenosis.
Methods: Consecutive 87 patients with severe aortic valve stenosis and age- gender matched 83 control subjects were enrolled. Patients with significant concomitant valvular disease, established coronary artery disease by history or angiography at index hospitalization, wall motion abnormalities and severe pulmonary disease were excluded. Severe aortic valve stenosis was defined as aortic valve area <1 cm2 or Vmax >4 m/second or mean gradient ≥40 mmHg. The fQRS was defined as the presence of various RSR' patterns (QRS duration <120 ms) with which included an additional R wave (R'), notching of the R wave or S wave, or the presence of more than one R' (fragmentation) without a typical bundle branch block in two contiguous leads corresponding to a major lead set for major coronary artery territory (Fig. 1).
Results: Fragmented QRS was detected in 40 (46%) patients in aortic valve stenosis group and in 15 (18%) control subjects (p<0.001) (Table 1). Study population was divided into two groups according to the having fQRS or not in order to identify independent determinants of fQRS (Table 2). Factors presented in Table 2 were entered in multivariate binary logistic regression analysis. In multivariate binary logistic regression analysis, presence of aortic valve stenosis was the only independent factor associated with the fragmented QRS (OR, 3.69; 95% CI, 1.81-7.55, p < 0.001).
Conclusıon: We have detected first time increased frequency of fragmented QRS in patients with severe aortic valve stenosis.



Clinical and laboratory characteristics of patients and control subjects.

Variables	AS (-) n=83	AS (+) n=87	P
Age, years	75 ± 9	76 ± 7	NS
Male gender, n (%)	36 (43)	30 (35)	NS
Hypertension, n (%)	33 (40)	51 (59)	0.02
Diabetes, n (%)	5 (6)	12 (14)	NS
Smoking, n (%)	17 (20)	11 (13)	NS
Hypercholesterolemia, n (%)	9 (11)	13 (15)	NS
fQRS, n (%)	15 (18)	40 (46)	<0.001
Cardiovascular medications			
ASA, n (%)	3 (4)	6 (7)	NS
β-blocker, n (%)	10 (12)	13 (15)	NS
Cholesterol lowering drugs, n (%)	7 (8)	8 (9)	NS
ACEI or ARB, n (%)	14 (17)	29 (33)	0.01

ACEI, angiotensin converting enzyme inhibitor; ARB, angiotensin receptor blocker; ASA, acetylsalicylic acid; fQRS, fragmented QRS; NS, non-significant.

Clinical and laboratory characteristics of subjects with or without fQRS.

Variables	fQRS (-) n=115	fQRS (+) n=55	P
Age, years	75 ± 8	76 ± 7	NS
Male gender, n (%)	48 (42)	18 (33)	NS
Hypertension, n (%)	52 (45)	32 (58)	NS
Diabetes, n (%)	9 (8)	8 (15)	NS
Smoking, n (%)	22 (19)	6 (11)	NS
Hypercholesterolemia, n (%)	15 (13)	7 (13)	NS
Aortic stenosis, n (%)	47 (41)	40 (73)	<0.001
Cardiovascular medications			
ASA, n (%)	7 (6)	2 (4)	NS
β-blocker, n (%)	16 (14)	7 (13)	NS
Cholesterol lowering drugs, n (%)	10 (9)	5 (9)	NS
ACEI or ARB, n (%)	26 (23)	17 (31)	NS

ACEI, angiotensin converting enzyme inhibitor; ARB, angiotensin receptor blocker; ASA, acetylsalicylic acid; fQRS, fragmented QRS, NS, non-significant.

PP-404

Short Term Effect of Transcatheter Aortic Valve Implantation (TAVI) on Echocardiographic Parameters: A Single Centre Experience

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Introductıon: Aortic valve surgery is the standart therapy of symptomatic severe aortic stenosis (AS). But Transcatheter Aortic Valve Implantation (TAVI) has been a recently established treatment for the patients inoperable or high risk for valve surgery. In Europe and in our clinic two of the devices mostly used for TAVI are Edwards SAPIEN (Edwards Lifesciences, Irvine, CA) and CoreValve System (Medtronic Inc., Minneapolis, MN). The aim of this study is presenting the short term effects of TAVI on echocardiographic outcomes.
Methods: The short term postprocedural echocardiographic parameters of 36 patients who underwent TAVI in our clinic between 01 June 2012 and 31 May 2013 were studied. Edwards Sapien or CoreValve bioprotesis valves implanted to all of the patients by transfemoral approach (by surgical cut down or percutaneously). Echocardiographic parameters of the baseline and 1 month after the procedure were compared.
Results: Procedural succes rate was %100 (36/36). The mean age of the patients was 78.5±7.6. Twenty (55,6%) of the patients were female. The Logistic EuroScore was 36.4±14.3 (Table 1). Twenty six (72%) of the patients had been implanted with

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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).
Conclusıon: 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 Greft

Table 2. Baseline and post TAVI echocardiographic measurements

	Baseline	Post TAVI	p
LVEF	50,2±12,7	55,7±9,6	<0.001
LVESD (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, LVESD= 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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Introductıon: 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. Avarage age was 58.3±12.8 (30-79) years. 21 (72.5%) patient were male and 8 (27.5%) patients were famale. 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.
Conclusıons: 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.
Conclusıon: 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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Aım: 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.
Materıal-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.
Conclusıon: 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.