Table 2. The laboratory findings of the study population

	Group 1	Group 2	Group 3	p Overall	p Group 1-3	p Group 2-3	p Group 1-2
INR, %	2.54 (2.01-2.99)	1.37 (0.94-1.95)	0.97 (0.85-1.21)	<0.001	<0.001	<0.001	<0.001
Hemoglobin, g/dL	12.0 (11.0-16.8)	12.0 (11.4-16.3)	13.0 (11.7-16.2)	0.193	-	-	-
WBC, x1000/μL	7.34 (3.92-11.3)	7.43 (3.91-11.2)	7.12 (4.31-11.0)	0.295	-	-	-
Platelet, x1000/μL	236 (119-442)	219 (135-382)	236 (151-400)	0.173	-	-	-
MPV, fL	7.56± 0.63	8.26± 0.63	7.63± 0.68	<0.001	0.710	<0.001	<0.001
PCT, %	0.174 (0.089-0.274)	0.203 (0.106-0.311)	0.183 (0.099-0.304)	<0.001	0.433	<0.001	<0.001
PDW, %	17.3 (14.2-19.4)	17.9 (13.7-20.5)	17.5 (15.4-19.7)	<0.001	0.165	0.004	<0.001

INR= International normalized ratio, MPV= Mean platelet volume, PCT= Plateletcrit, PDW= Platelet distribution width, WBC= White blood cell

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Polymorphisms of the Human Platelet Alloantigens-1 in Nonvalvular Atrial Fibrillation Patients with Ischemic Stroke in Turkish Population

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Background: Atrial fibrillation (AF) is the commonest sustained cardiac arrhythmia, which confers a high risk of mortality and morbidity from stroke and thromboembolism. Altered platelet activation and platelet-dependent thromboembolism have been associated with the pathogenesis of cardiovascular or thromboembolic disorders, which include atherosclerosis, coronary disease and cerebrovascular disease. Platelet adhesion and activation are mediated by human platelet alloantigens (HPAs), a complex of platelet membrane glycoproteins (Gp) and other cellbound Factors. By altering platelet receptor sensitivity, polymorphisms in platelet Gp directly impact platelet susceptibility to activating stimuli, which is linked with an increased risk of atherothrombotic events, including acute myocardial infarction. We wanted to investigate HPA-1 polymorphism in patients with AF who have had a stroke than in healthy controls.
Methods: The HPA-1 polymorphism was analysed in 70 patients with nonvalvuler AF who have had a stroke and 65 healthy individuals with no documented episode of AF matched for age, race and sex. Because ethnic differences have been reported for HPA-1. The HPA-1 gene polymorphism was identified by polymerase chain reaction (PCR) method. Distribution of the HPA-1 gene polymorphism alles (allel 1a, allel 1b) genotypes (1a1a, 1a1b and 1b1b) were determined in study population. Demographic characteristics and risk factors for AF and stroke were evaluated in the study groups.
Results: There was no significant difference with respect to age and gender between groups. Genotype and allel distribution of AF patients who have had a stroke and control groups shown in the table. The frequency of 1a1a genotype of HPA-1 polymorphism was significantly lower in patients with AF patients who have had a stroke group compared with control group (49 (70%) vs 57 (87.7%), p=0.012). The frequency of 1a1b genotype heterozygous genotype was significantly higher in AF patients who have had a stroke group than control (18 (25.7%) vs 6 (9.2%), p=0.012). Between the two groups were compared according to the dominant genetic model (1a1b + 1b1b vs. 1a1a), The number of patients carrying at least one 1b mutant allele (1a1b + 1b1b) was significantly higher in AF patients who have had a stroke group than control (21 (30%) vs 7 (10.8%), p=0.006). With respect to allelic distribution (1a vs 1b, additive model), the frequency of the 1b allele was significantly higher in AF patients who have had a stroke (24 (17.1%) vs 8 (6.1%), p=0.009).
Conclusıons: In this study, our data suggest that the HPA-1 gene polymorphisms may be associated with AF patients who have had a stroke from other clinical risk factors, but this should be confirmed in a much larger series of patients. Screening for this mutation may help in identifying patients at risk and in deciding the antithrombotic strategy.

Human platelet antigens -1 gene polymorphisms genotype and allel frequencies

	AF patients with stroke (n:70)		Control (n:65)		P
	n:	%	n:	%	
1a1a genotype	49	70	57	87.7	0.012
1a1b genotype	18	25.7	6	9.2	0.012
1b1b genotype	3	4.3	1	1.5	0.347
1a1b + 1b1b genotypes (Dominant genetic model)	21	30	7	10.8	0.006
1b allel	24	17.1	8	6.1	0.009

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Evaluation of Left Atrial Functions and the Electromechanical Delay Time by Echocardiography in Patients with prediabetes

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Objective: Prediabetes is a predictor of manifest diabetes mellitus (DM) and is known to be associated with increased cardiovascular mortality and morbidity. As the diabetic patients are at higher risk of developing atrial fibrillation (AF), a significant part of the patients with lone AF are also diabetic. Inter-atrial and intra-atrial electromechanical coupling time which can be measured by both prolonged P wave dispersion and tissue Doppler imaging are known as the non-invasive predictors of atrial fibrillation. Impairment of left mechanical functions could be associated with the increased risk of developing AF. In our study, we examined the atrial electromechanical coupling time which is measured by the tissue Doppler imaging (TDI), left atrial (LA) mechanical function by disc method, and P wave dispersion of the prediabetic patients.
Matherıal-Method: 50 prediabetic (22 M, 28 F; median age: 51±10 years) and 41 healthy subjects as control group included in this study. Atrial electromechanical coupling time was calculated from lateral mitral annulus (PA lateral), septal mitral annulus (PA septum) and right ventricular tricuspid annulus (PA tricuspid) by TDI. Left atrial volumes (maximum, minimum, and pre-systolic) were measured in the apical four-chamber view with the disk method and were indexed to body surface area. Left atrial mechanical functions (LAPEV, LAPEF, LAAEV, LAAEF, CV, LATEV) were evaluated. P wave dispersion was obtained by 12-lead electrocardiography and was calculated as subtracting the minimum P wave duration from maximum P wave duration period. The results of prediabetic and control groups were analysed.
Results: Inter-atrial (PA lateral-PA tricuspid) and left atrial electromechanical delays were found to be significantly longer in patients with prediabetes than the control group (21.5±10.5 vs 13.8±5.6 msec; p < 0.001, 12.5±8.1 vs 6.7±3.7, p < 0.001, respectively). Maximum and pre-systolic volumes were found to be similar in both groups (29.1±7.2 to 27.1±8.2, p=0.24, 18.6±4.4 to 17.8±6.6, p=0.14, respectively). In the prediabetic patients, LATEV, LAAEV, CV and LAAEF were found to be higher than the control group (18,8±6,3 vs 16,1±4,5, p=0,01; 8,7±3,1 to 5,7±2,4; p<0,001, 31,3±8,3 vs 27,5±9,7, p=0,047; 0,53±0,16 vs 0,31±0,13, p<0,001, respectively).
In prediabetic patients, P-wave dispersion was found to be longer than the control group (55,3±11,1 msec to 28.9±5.9 msec, p<0.001, respectively).
Conclusıon: Prolonged atrial electromechanical delay and prolonged PWD suggested that prediabetic population have an increased risk for development of AF than the normal population. Impaired left atrial mechanical functions could be a predictor of the heart failure and atrial fibrillation which may develop in future. In our opinion, in patients with presiabetes, some precautions are to be taken before the development of overt diabetes, may prevent such cardiovascular complications as AF and heart failure.

PP-159

Autonomic Dysfunction and Arrhythmic Disorders in Patients with Coronary Artery Disease

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Occurrence and progression of coronary artery disease (CAD) and heart failure (HF) are accompanied by worsening of autonomic regulation of circulation. In its turn, this contributes to development of supraventricular arrhythmias. In this connection, neural activity modulation may be an effective approach to treatment and prevention.
Methods: Estimation of sympathetic and parasympathetic activity in 40 patients with CAD and paroxysmal atrial fibrillation (AF) and in 40 healthy subjects was performed by Valsalva maneuver test, evaluation of heart rate variability (HRV) and blood

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pressure (BP) followed by calculation of spontaneous baroreflex value (Finometer-PRO). Approaches to autonomic activity modulation included atrial sympathetic ganglia ablation and pulmonary veins isolation. Renal artery ablation (RAA) was performed in presence of resistant hypertension.
Results: Autonomic regulation of circulation was characterized by decrease in parasympathetic and increase in sympathetic influence on the heart, particularly, in patients with diurnal paroxysmal AF. At the same time, arterial baroreflex magnitude was significantly higher in patients with AF related to enhanced sympathetic activation in comparison with control. Ablation of atrial sympathetic ganglia was accompanied by reduction of AF recurrence rate. However, this effect was less evident in comparison with the effect of pulmonary veins isolation. Moreover, HRV restoration in 3 months after ablation of sympathetic ganglia indicates the nondurable effect of this procedure. In the end, baroreflex restoration after RAA observed before may be an important mechanism of not only BP lowering but also reduction of AF paroxysms rate.
Conclusıon: Disorders of autonomic regulation of circulation is an important mechanism of arrhythmogenesis, so its modulation can be used in patients with AF as a therapeutic strategy.

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A Survey of Concordance of Anticoagulant Therapy Administration in Atrial Fibrillation According to Guidelines: A Secondary Care Center Experience

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Objectıve: Atrial fibrillation (AF) is the most prevalent permanent rhythm disturbance. For the diagnosis and treatment of AF numerous guidelines have been published. The data about implementation of risk calculation table (CHA2DS2-VASC score) which was suggested by European Society of Cardiology (ESC) for prevention of stroke is very limited. Our aim was to document the data about implementation of guidelines and CHA2DS2-VASC score in AF treatment by cardiology specialists.
Materıals-Methods: The patients who had been following up with diagnosis of AF admitted to cardiology outpatient units, retrospectively were included into present study in 2012. With registration of clinical and demographic properties of patients CHA2DS2-VASC scores and treatment applications were investigated. According to the result of International Normalized Ratio (INR) workup at last 1 year, the success of anticoagulant therapy was evaluated.
Results: In the year of 2012 among 2303 patients who were admitted to cardiology outpatient clinic, 137 (6.2%) patients were diagnosed with AF. Of 128 patients that were recruited to study, 83 (64.8%) were women. Mean age was 67,5±10,9 years. Mean CHA2DS2-VASC score was found 3,36±1,77. Among 108 patients whose CHA2DS2-VASC was $\geq$2 and who have to use anticoagulant therapy, 71 (65.7%) patients were using warfarine and 1 (0.9%) was using rivoraxaban. Sixty six patients (51.6%) were using acetylsalicilic acid. Even though warfarine was initiated, discontinuation rate of treatment was 10.2%. According to retrospective evaluation of INR levels, it was seen that in 71.1% of patients theraupetic targets were established.
Conclusıon: Data of patients who were following up and treated with diagnosis of AF in cardiology outpatient clinic showed that ESC guidelines were taken into consideration, but difficulty in follow up of warfarine efficacy and concerns about drug-food interactions lead important number of patients not to use oral anticoagulation, but instead lead them to use acetilysalicilic acid in higher rates of guideline suggestions.

PP-161

Effect of Cigarette Smoking on Tp-e interval, Tp-e/QT Ratio and Tp-e/QTc Ratio

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Introductıon: Cigarette smoking increases the risk of sudden cardiac death. Smoking may predispose to ventricular fibrillation and sudden cardiac death by altering ventricular repolarization and enhancing sympathetic nervous system activity. We aimed to study the effects of smoking on ventricular repolarization.
Methods: We studied 47 healthy subjects. 24 long-term heavy smokers (10 women, mean age: 40±5 years) constituted the study group. 23 non-smokers (10 women, mean age: 42±10 years) constituted the control group. ECG was obtained from all subjects. Tp-e interval, Tp-e/QT ratio, Tp-e/QTc ratio were measured. These parameters were compared between the groups.
Results: There was no significant difference at the basic clinical and echocardiographic variables (p> 0.05). QT interval and QTc interval were similar between smokers and nonsmokers. Tp-e interval (p=.001) and Tpe/QT (p=.003) ratio were higher in heavy smokers compared to non-smokers. Tpe/QTc ratio (p=.001) was also higher in smokers. Other ECG parameters were similar between smokers and nonsmokers groups.
Conclusıon: Tp-e interval, Tpe/QT ratio and Tpe/QTc ratio are prolonged in heavy smokers.

Table. Electrocardiographic results of groups.

	Group I Non-smokers	Group II Smokers	p
PR	157.8 ± 21.1	148.8 ± 19.9	0.136
QT	381.6 ± 24.1	341.3 ± 22.5	0.554
QTC	389.8 ± 22.3	379.8 ± 35.2	0.535
TPE	78.9 ± 7.3	85.3 ± 10.7	0.020
TPE/QT	0.21 ± 0.02	0.25 ± 0.03	0.001
TPE/QTC	0.20 ± 0.02	0.23 ± 0.03	0.001

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The Assessment of Left ventricule Mechanics in Patients with Isolated Left Bundle Branch Block

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Background: Left bundle branch block (LBBB) is characterized by early septal radial inward thickening, followed by late posterior inward thickening. This results in a significant left ventricular (LV) dyssynchrony. LBBB, which is associated with increased mortality, may impair the mechanical functions of LV. In this study, we aimed to evaluate cardiac mechanics in patients with isolated LBBB using speckle tracking echocardiography (STE).
Methods: The study was composed of 45 patients who were admitted to cardiology clinic between October 2012 and April 2013. Patients with chronic obstructive lung disease, history of coronary artery disease, diabetes mellitus, primary pulmonary hypertension, constrictive pericarditis, moderate or severe mitral and/or aortic stenosis and regurgitation, and poor imaging quality were excluded. The patients with isolated complete LBBB (n=14) and incomplete LBBB (n=11) were included as group 1 and 2, respectively. The group 3 was composed of healthy individuals (n= 20). All patients provided written informed consent prior to transthoracic echocardiographic examination. In STE examination, the LVapical long, four- and two-chamber images and short-axis views at basal, mid-papillary and apical levels at frame rates between 40 and 80 frames/s were used for assessing 2D LV longitudinal, radial, circumferential strains and rotation. The LV twist was calculated as an absolute apex-to-base difference in LV rotation.
Results: The mean age of the study population was 43±12 (F: 27, M:19). There were no significant differences between the groups in terms of age and gender. Group 1 and 2 had significantly lower 4C (17.6 ± 1.7 vs. 20 ± 1.3, p < 0.001 and 18.5±1.8 vs. 20±1.3, p:0.012, respectively), LAX (17.5 ± 1.3 vs. 19.8± 1.5, p<0.001 and 18.4±1.7 vs. 19.8±1.5, p: 0.023, respectively) and 2C (17.7± 1.4 vs. 20.1± 1.4, p<0.001 and 18.5±1.9 vs. 20.1±1.4, p:0.018, respectively) peak longitudinal strain values compared to group 3. No statistical difference was observed between Group 1 and group 2 regarding 4C (17.6 ± 1.7 vs 18.5±1.8 p:0.245), LAX (17.5 ± 1.3 vs 18.4±1.7, p:0.206) and 2C (17.7± 1.4 vs 18.5±1.9, p:0.236) peak longitudinal strain values. LV twist was not significantly different between group 2 and 3 (14.3±1.1 vs. 14.5±1.3, p:0.410), whereas group 1 had significantly reduced twist values (12.3±1.6 vs. 14.2±2.2 p:0.027 and 12.3±1.6 vs.14.7±1.4 p<0.001, respectively).
Conclusıon: LV twist and peak longitudinal strain values are impaired in patients with isolated complete LBBB, in contrast to patients who had incomplete LBBB or non-LBBB electrocardiography.

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Heart Rate Variability Parameters of Aviators With Ventricular Premature Beats Detected on Surface Electrocardiography

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Introductıon: Ventricular premature beats (VPBs) may give important clues for cardiac arrhythmias that can cause hazardous results in aviation by incapacitating the pilot particularly in acute phases of flight (takeoff and landing). Some changes can happen in heart rate variability (HRV) during flight. HRV, representing the beat-to-beat variation in cardiac cycle, is thought to reflect autonomic modulation of the sinus node, namely parasympathetic and sympathetic modulations, and sympathovagal interaction. We compared the HRV parameters of pilots with VPBs detected on ECG to figure out whether there is an association between the flight stresses and autonomic functions of the heart.
Materıal-Methods: 43 male pilot (age ranging from 25 to 42) who applied to Turkish Aeromedical Research and and Training Center for their routine examinations and have VPBs detected on surface ECG and because of this underwent 24-hour Holter monitoring were included in this study. All data was retrospectively analyzed and any pilot with cardiovascular disease accompanied was excluded. After obtaining their medical history, all aviators underwent a complete physical examination, chest X-ray, ECG, transthoracic echocardiography (TTE), 24-hour Holter monitoring, CBC and biochemical blood