resulting from intra and interatrial conduction disorders present a high risk as regards the generation of AF. Nasal continuous positive airway pressure (CPAP) is an effective and widely used method in the treatment of OSA. The purpose of the present study is to evaluate the short-term effects of nasal continuous positive airway pressure (CPAP) treatment on atrial electromechanical delay and p wave dispersion (Pd) in patients with obstructive sleep apnea (OSA).

Methods: A total of 24 OSA patients diagnosed with polysomnography who were planned to undergo CPAP therapy and 18 healthy subjects were included in the study. The basal intra and interatrial electromechanic delays prior to onset of the therapy were measured using Tissue Doppler Imaging (TDI). Pd was calculated on the basis of 12-lead ECG. In order to evaluate the effects of CPAP therapy, the patients underwent a re-evaluation on the basis of TDIs and 12-lead ECGs 6 months after the initiation of the therapy.

Results: Interatrial, left intraatrial and right intraatrial electromechanical delays prior to the therapy were found to be significantly greater in OSA group compared with the therapy group (39.2±8 vs. 21.1±2.8, p<0,001; 20.5±7.2 vs. 11.1±2, p=0,003; 20.7±11 vs. 10±2.6, p<0,001, respectively). Pd was found to be increased in OSA group compared with the healthy controls (44±7 ms vs. 28.5±4 ms, p<0,001). Compared with the basal values, interatrial, left intraatrial and right intraatrial electromechanical delays measured with TDI during the re-evaluation 6 months after the CPAP therapy were found to decrease (39.2±8 vs. 28.7±6.5 p<0,001; 20.5±7.2 vs. 15.6 ±5.1, p<0,002; 20.7±11 vs. 13.1±7.3, p<0.001, respectively). Such decreases were also valid for the post-therapy Pd values, compared with the basal values (44±7 ms vs. 37±7, p<0.001).

Conclusıon: CPAP therapy decreases the likelihood of AF generation by improving the electromechanical delay and P wave dispersion in patients with OSA.

PP-182

Comparison of Five QT Correction Methods in Patients with Hypoxic Brain Injury

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Background: There has been increasing interest in developing non-invasive methods to assess ventricular arythmias and the risk of sudden cardiac arrest. Certain electrocardiographic repolarization indexes are valuable in determining prognosis of healthy individuals. Increases in the heart rate shortens the QT interval. Thus, many methods have been developed to correct the QT interval to account for changes in the heart rate. In this study, we evaluated five different heart rate QT correction formulas in patients with ischemic-hypoxic brain injury.

Methods: Forty patients with ischemic-hypoxic encephalopathy (21 male, 19 female; mean age 60±18 years) were enrolled in the study. While hypoxia was caused by cardiopulmonary resuscitation (CPR) in thirty-seven patients (92.5%), three patients (7.5%) experienced hypoxia from other causes. Coronary revascularization had been given to 11 patients (27.5%) previously. QT, JT, JTa, TaTe intervals were measured over 24 hours by ambulatory ECG monitoring measuring the slowest and fastest heart rates (Table 1). These measured repolarization parameters were adjusted using 5 different correction formulas and distinctions between these correction formulas were evaluated (Table 2).

Results: The Fridericia method was least affected by heart rate in particular the QT (419 ± 51 msec, 451 ± 49 msec) and TaTe (103 ± 33 msec, 115 ± 23 msec) during the fastest and slowest heart rates. For the parameters JT (292 ± 50 msec, 309 ± 38 msec) and JTa (198 ± 33 msec, 201 ± 53 msec), the Framingham method gave the most accurate results. What should be the upper limit of the QT interval? This question remains important; because, the 450 msec limit for males and 470 msec limit for females has been calculated using the Bazett's formula. While it is now clear that the Bazett's formula does not correct the QT interval safely. For example, in our study, the number out of 40 patients with long QT interval was 20 patients by the Bazett's formula and 35 patients by the Nomogram formula during fastest heart rate (longer than 450 msec for male, longer than 470 msec for female). Whereas according to the Fridericia method, the number of patients with long QT interval was nine. We found that at high heart rates, the Bazett's and Nomogram methods were inadequate for determining long QT intervals. Incorrect long QT interval diagnoses are made according to QT intervals calculated using the Bazett's and Nomogram methods and based on this medications are chosen. Hence, caution should be used with QT intervals calculated using these two methods especially in higher heart rates.

Conclusıons: In this study, the Bazett's formula, which is the most commonly used correction method, was insufficient to correct the ventricular repolarization parameters. The Fridericia formula was the least affected by heart rate and gave more accurate results than Bazett's formula in determining the QT and TaTe intervals.

QT correction formulas based on heart rate

Bazett's	QTc= QT/$\sqrt{RR}$
Fridericia	QTc= QT/$\sqrt[3]{RR}$
Hodges	QTc= QT+0.384x(60-HR)
Framingham	QTc= QT+0.154x(1000-RR)
Nomogram	If RR>1000; QTc= QT+0.116x(1000-RR)If 600<RR<1000; QTc= QT+0.156x(1000-RR) If 600<RR; QTc= QT+0.384x(1000-RR)
HR: heart rate	

ECG measurements (mean±SD) (msec)

RR slowest	957 ± 344
QT fastest	341 ± 63
QT slowest	443 ± 72
JT fastest	214 ± 50
JT slowest	304 ± 54
JTa fastest	127 ± 33
JTa slowest	188 ± 43
TaTe fastest	82 ± 20
TaTe slowest	111 ± 28

PP-183

The Importance of Fragmented QRS in Evaluation of Cardiac Iron Burden, in Patients with β-Thalassemia Major

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Objectıves: Beta thalassemia major, which causes chronic hemolytic anemia, is an inherited hemoglobin disorder. The treatment with chelating agents are shown improvement, but repeated blood transfusions, continue to lead to iron overload and dysfunction of organs. In these patients, the leading causes of death are heart failure and arrhythmias, so cardiac iron overload monitoring is essential. Cardiac MRI T2 * values, recommended for the evaluation of iron overload in the heart, this is a technique that can be trusted, but the high cost and difficult. The objective in this study, is investigation of the importance of fragmented QRS (fQRS) and the relationship between cardiac T2 * values in assessment of cardiac iron overload.

Methods: In this study, patients between the ages of 15-40 with a diagnosis of thalassemia major were enrolled. In these patients, cardiac MRI T2 * values and ECGs, were evaluated annually. Cardiac T2 * value of less than 20, was considered as cardiac iron overload. Initial studies reported of fQRS, can be used for the evaluation of scarring and fibrosis, fragmented QRS was defined as an additional spike of QRS complexes without bundle branch block. The relationship was investigated, between cardiac T2 * values and the presence of fragmented QRS in ECG.

Results: This study included a total of 103 patients (46 males, 57 females) follow up with diagnosis of beta thalassemia major in our center. The mean age of the patients was 22.6 ± 6.6. All of the patients were receiving regular blood transfusions and iron chelator. For patients with coronary artery disease, had no risk factors other than smoking. 50 patients (48%), fQRS detected, 37 of them (74%), T2 * values were found to below. Accordingly, the presence of fQRS, low T2 * value to predict the sensitivity of 86.0% and specificity of 78.3%, respectively.

Conclusıon: Cardiac involvement is the main cause of mortality, early diagnosis of cardiac dysfunction is vital in patients with beta thalassemia major. In these patients, researching the presence of fQRS on surface ECG, especially in cardiac T2 * value that cannot be follow-up in patients, regulation of treatment, due to cheap and easy method, must be considered.

PP-184

Evaluation of Left Atrial Mechanical Functions and Atrial Conduction Abnormalities in Maras Powder (Smokeless Tobacco) Users and Smokers

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Aim: Smokeless tobacco can be found in preparations for chewing or for being absorbed by nasal and oral mucosae. In Turkey a type of smokeless tobacco called Maras Powder (MP) is widely used in the southeastern region. The purpose of this study was to investigate whether MP damages intra- and interatrial conduction delay and left atrial (LA) mechanical functions as much as cigarette smoking.