

LP, 15.2% of HT, 33.3% of DM and 14.3% of the patients reached over 10 points. When diseases were compared to one another, COPD patients' anxiety levels were higher than HT and others, BP patients were higher than HT and others ($p < 0.05$).

Conclusion: HADS is a safe scale for use in inpatients for physical diseases. In the literature, there is no disease comparison study, so we tested for individual ones. In our study, COPD and LP patients scored higher points. Dowson et al. found that 50% COPD patients showed clinically relevant anxiety levels with HADS. We found this rate to be 40% in our study. A study by Pallant et al. found 38.2% of outpatients with back pain scored 10 or more points in their HADS-A, while in our study we found a higher rate for BP inpatients (50%). This higher rate may be related to our older patient population or a worse pain which caused a hospitalization. Cheung et al. in their study found that 15% of hypertensive patients had more than 10 points. This is similar to our study. High rates of anxiety levels in COPD and BP patients may be a result of the vicious acute phase of the diseases and symptoms of COPD and BP may lead the clinicians to give priority to physical symptoms.

Keywords: anxiety, back pain, COPD

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[Abstract:0452] Anxiety, stress, and adjustment disorders

Angiotensin-converting enzyme and methylenetetrahydrofolate reductase gene variations in fibromyalgia syndrome

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Objective: Fibromyalgia Syndrome (FM) is a common disease characterized by generalized body pain, sensitivity in certain physical areas (sensitive points), lowered pain threshold, sleep disorder, fatigue. The study aimed to determine the effects ACE I/D and MTHFR C677T gene polymorphisms in Turkish patients with FM and evaluate if there was an association with clinical features. The etiopathogenesis of FM is still not clearly known. Various viral infections, stress, living conditions, chronic sleep disorders, physical and emotional traumas, major neuro-endocrinal malfunctions as well as genetic factors are considered in the etiopathogenesis of FMS.

Methods: This study included 200 FM patients and 190 healthy controls recruited from the department of Physical Medicine and Rehabilitation at Gaziosmanpasa University in Tokat, Turkey. ACE I/D polymorphism genotypes were determined by using polymerase chain reaction (PCR) by specific primers. The MTHFR C677T mutation was analyzed by PCR-based restriction fragment length polymorphism (RFLP) methods.

Results: We found a statistically significant relation between ACE polymorphism and FM ($p < 0.001$, OR: 1.71, 95% CI: 1.28-2.27). However, this was not the case for ACE polymorphism and the clinical characteristics of the disease. There was also no statistically significant relation between MTHFR C677T mutation and FM ($p > 0.05$, OR: 1.20, 95% CI: 0.82-1.78), but dry eyes, which are among the clinical characteristics of FM, were significantly related with MTHFR C677T mutation ($p < 0.05$).

Conclusion: Angiotensin-converting enzyme is a zinc metallopeptidase involved in blood pressure regulation via angiotensin-renin cascade, generating angiotensin II (ATII) from angiotensin I, and via degradation of the powerful vasodilator bradykinin. Several studies have also demonstrated that ACE might be involved in hypothalamic-pituitary-adrenal axis (HPA) regulation and catecholamine production and is thus required for sympathoadrenal activation during stress. The co-localization of angiotensin with dopamine-synthesizing neurons can suggest an involvement of the brain renin-angiotensin system in regulation of mood. It is suggested that ACE polymorphism is a risk factor for neuropsychiatric disturbances and related diseases. We are thinking that we must investigate the associations between ACE gene I/D polymorphism and FM. Jenkins et al. have also found that in patients with sleep disorders, which are one of the symptoms of fibromyalgia, there were considerable differences in the polymorphism of ACE gene 25-28. These patients were not diagnosed as FM. Since FM is associated with depression and sleep disorders, we investigated the relation of FM and ACE polymorphism. MTHFR mutations also cause cytokine activation. MTHFR is a key enzyme in Hcy metabolism which plays a major role in regulating endothelial function. It regulates Hcy and methionine metabolism and converts 5,10-methylenetetrahydrofolate to 5-methyltetrahydrofolate (primary form of folate in circulation). Our findings showed that there are associations of ACE I/D polymorphism

with susceptibility of a person for development of fibromyalgia syndrome. Also, an association has been determined between MTHFR C677T polymorphism and dry eyes, which are among the clinical characteristics of FM. Our study is the first report of ACE I/D and MTHFR C677T polymorphisms in fibromyalgia syndrome.

Keywords: fibromyalgia syndrome, MTHFR C677T, ACE I/D

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[Abstract:0457] Anxiety, stress, and adjustment disorders

Quality of life among children and adolescents with congenital or acquired heart disease in Turkey

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Objective: Aim of this study is to measure the quality of life among children and adolescents with congenital or acquired heart disease and to evaluate the perception differences between the patients and their parents in Turkey.

Method: Fifty-nine patients between the ages of 8-20 from Dr. Behcet Uz Children's Hospital Pediatric Cardiology Service were enrolled in our study. Inclusion criteria were being both mentally and educationally capable of answering the questionnaire and having diagnosed congenital or acquired heart disease at least one month ago. Validated and reliable "Pediatric Quality of Life Inventory" (PQOLI) which consists of three scales (sociodemographic data form, psychosocial, total point) was used. PQOLI is a self-assessment measure and achieving greater scores is correlated with better life quality. All data were analyzed on SPSS 15.0 statistical program.

Results: The study group consisted of 57.6% boys and 42.4% girls. Mean age was found to be 12.58±32.05 years. 33 of the participants were between 8 to 12 and 26 between 13 to 20 years old. PQOLI and subscales of all the patients were compared in terms of gender and age; however, no statistically significant difference has been found ($p>0.05$). 11.9 % of the study group had a cyanotic heart disease and the others were acyanotic. Comparing the cyanotic and acyanotic group with PQOLI revealed statistically significant differences only in the parental psychosocial health ($p=0.009$) and total score ($p=0.005$). 47.5% of the patients were cardiac catheterized. Regarding cardiac catheterization, except PQOLI of parental physical score all of the other parental and patient scores were found to be significantly lower ($p<0.05$). 42% of the patients had undergone open heart surgery and PQOLI of these children revealed significantly lower physical scores ($p=0.017$) and also total PQOLI scores of parents and patients were statistically significantly lower ($p=0.048$). Patients who were under continuous drug therapy had statistically significant lower PQOLI scores at all subgroups of both parents and patients ($p<0.05$) except physical health scores. Hospitalization had an effect on PQOLI. Patients without hospitalization, hospital admission 3 or less and 4 or more were compared and only the child life quality physical score was found to be statistically significant low ($p<0.05$).

Conclusion: In our study, despite of global expectation, neither having cyanotic disease nor elder age revealed a decrease in life quality. Parents of cyanotic patients had decreased perception of PQOLI whereas the patients did not. Catheterization did not make a difference in parental physical health perception; thus we thought that patients had developed hope to be cured with catheterization. Continuous drug therapy administration and the number of hospitalizations both had statistically important negative effects on life quality; however, previous studies had never mentioned these effects. This study revealed that there were many discrepancies between patients and parents in many fields of life quality. Nowadays life quality gains importance globally, and our study is the first and pioneering one in Turkey which evaluates children and adolescents with congenital or acquired heart disease.

Keywords: children, heart disease, quality of life

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