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nitric oxide (NO) and renin levels were measured with ELISA. In addition, ET-1, ET receptor A (ETR-A) and ET receptor B (ETR-B) mRNA expression in heart and aorta vascular tissue were assessed by quantitative real time reverse transcription polymerase chain reaction.
RESULTS: Blood pressure, serum ET-1 and ETR-A mRNA expression levels were significantly increased while serum renin, NO and ETR-B mRNA expression levels were significantly decreased in H group ($p \leq 0.05$). A significant decrease in blood pressure and a significant increase in renin, NO and ETR-B mRNA expression levels were observed in HO group treated with ozone for 10 days ($p \leq 0.05$).
CONCLUSION: According to our findings, we can say that the ozone treatment reduces blood pressure in DOCA-salt hypertensive rats. Ozone is antihypertensive factor effective in preventing the progression of hypertensive disease, through increasing NO production to prevent vasoconstrictor effect that could occur due to an increase ET-1 and ET-A mRNA activity in the heart and vascular tissue.

OC32

Queeg Spectral Analysis Characteristics of Macedonian and Turkish Adults with ADHD

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AIMS: As it is well known ADHD is the most common neuropsychiatric disorder worldwide. Contrary to childhood, the incidence in adult population is not well determined, especially in East European region. The aim of this joint study was to determine EEG spectral power differences as objective indicator of brain dysfunction in Macedonian and Turkish adults with ADHD, and age and sex matched normal adults by using QEEG analysis.
MATERIAL-METHODS: We investigated EEG frequencies in 22 Macedonian and 15 Turkish adults with ADHD and 20 Macedonian and 22 Turkish control subjects. Two EEG recordings of five minutes long were taken during eye-closed and eye-open resting conditions with 21 electrodes placed according to international 10/20 system. Fourier transformation was performed to obtain absolute and relative power density in delta (0.5-4Hz), theta (4-8Hz), alpha (8-13Hz) and beta (13-21Hz) frequency bands.
RESULTS: There were no statistical differences between groups in absolute spectral power. In relative power analysis, Macedonian ADHD adults showed greater relative theta and beta compared to other groups, while Turkish ADHD adults had more relative delta power. There were no significant differences between the groups for relative alpha.
Taking into consideration the ADHD and control groups solely, adults with ADHD appear to have increased frontal midline theta and beta power over the entire scalp as their predominant EEG difference from the normal control subjects.
These results suggest that quantitative EEG may be used to differentiate ADHD adults from normal adults but fail to meet the common characteristics between Macedonian and Turkish ADHD adults. Various possible contributors to these differences will be discussed.

OC33

Interaction between Cannabinoid CB1 Receptor and T-type Calcium Channel on Penicillin Induced Epileptiform Activity in Rat

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AIM: Experimental studies show that cannabinoids have anticonvulsant effects on various models of experimental epilepsy, and calcium channels mediate these effects. The aim of the present study is to investigate the interaction of cannabinoid (CB1) and a selective T-type calcium channel blocker NNC 55-0396 in penicillin-induced epileptiform activity.
METHODS: Wistar rats were anesthetized with urethane (1.25 g/kg, i.p.) and placed in a rat stereotaxic apparatus. Electrodes were placed over the somatomotor cortex of the left hemisphere for bipolar measurement and the ECoG activity was monitored on PowerLab data acquisition system. 500 IU Penicillin-G was injected intracortically(i.c.) to the rats brain cortex in all groups. In the experimental groups; CB1 receptor agonist ACEA (2.5 and 7.5 µg) and antagonist AM251 (0.25 and 0.125 µg) intracerebroventricularly(i.c.v), and NNC 55-0396 (10 and 30 µg, i.c) were applied 30 minutes after penicillin injection.The data obtained were compared by One-Way ANOVA with post-hoc Tukey test.
RESULTS: AM251 (0.25 µg) significantly increased the mean spike frequency at 30th minute, while 0.125 µg was non-effective. ACEA (7.5 µg) significantly decreased the mean spike frequency at the 50th minute, while the dose of 2.5 µg ACEA was non-effective. NNC 55-0396 (30 µg) showed anticonvulsant effect, whereas the dose of 10 µg NNC 55-0396 was non-effective. NNC 55-0396 (30 µg) + AM251 (0.25 µg) significantly reduced the mean spike frequency. NNC55-0396 inhibited the proconvulsant effect of AM251. The administration of the most effective doses of NNC 55-0396 (30 µg) and ACEA 7,5 µg) caused earlier appearance of anticonvulsant activity. The co-administration of non-effective NNC 55-0396 (10 µg) + non-effective ACEA (2,5 µg) significantly decreased the mean spike frequency at the 50th minute.
CONCLUSION: Our data suggest that the anticonvulsant activity of cannabinoids is at least partly mediated by the T-type calcium channels.

OC34

Use of Multifrequency Bioelectrical Impedance Analysis (MF-BIA) to detect the Source of Dehydration in Professional Divers who Dive with Heliox

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AIM: Dehydration develops both in diving and under pressure conditions in divers. This effect is greater in cold water. The level of dehydration has been known to be a predisposing factor for the development of decompression sickness in divers. Bioelectrical impedance analysis is widely used in many clinics to measure body compartments in sports medicine, and in weight reduction programs.
The aim of this study was to determine the level of dehydration in

divers who dove with helium/oxygen (heliox) mixture and to determine whether the source of this dehydration was intracellular and/or extracellular by means of multi-frequency bioelectrical impedance analysis (MF-BIA).
METHODS: The study was conducted in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of the Istanbul Faculty of Medicine at Istanbul University. Eleven male professional divers were enrolled in the study. In order to determine the level of dehydration, MF-BIA was carried out (at 5, 50, and 100 kHz) and capillary hematocrit (Hct) was measured twice: once before diving and then after leaving the pressure room.
RESULTS: When pre-diving and post-diving parameters were compared, significant increases in the resistance at 5 kHz ($p<0.001$), 50 kHz, ($p<0.001$), and 100 kHz ($p<0.01$) and Hct ($p<0.01$) were observed after diving. Similarly, a statistically significant fluid shift was found in total body water, extracellular water and intracellular water, respectively, –1.30 L ($p<0.001$), –0.85 L ($p<0.001$) and –0.45 L ($p=0.011$).
CONCLUSIONS: Our results showed that mild dehydration occurred both in the intracellular and extracellular compartments in divers after deep diving. This study also indicates that MF-BIA could be a reliable new method for determining the dehydration status in divers.

OC35

Investigation of Effect of Intravenous Glucose Administration on Noradrenaline Levels in Lateral Hypothalamic Area by using Microdialysis Method in Rat

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INTRODUCTION: It is known that many neuroactive molecules have role related to feeding processes in lateral hypothalamic area (LHA) known as hunger centre. Noradrenaline is effective in regulation of food intake in different hypothalamic areas. But, it is unknown whether feeding change noradrenaline levels in LHA or not. We aimed to investigate the possible effects of intravenous glucose administration on noradrenaline and its' metabolite dihydroxy phenyl glycol (DHPG) levels in LHA by using brain microdialysis method in the present study.
METHOD: In the experiments we used adult male Wistar rats composed of two group normally fed and the other two group applied food restriction for 24 hours. All rats set to a stereotaxic apparatus under anaesthesia and microdialysis performed into LHA according to stereotaxic coordinates. Microdialysis samples were collected for 20 min periods. After recording first samples, 1.4ml/kg isotonic saline and glucose (%50) solutions were infused via tail vein. Then, the other microdialysis samples were collected for 40 min in fasted and satiated rats. Noradrenaline and DHPG levels were analysed by using HPLC-ECD system and determined as pictogram. All values normalised with controls before application and statistically analysed by One Way ANOVA.
RESULTS: Noradrenaline concentration in fasted rats higher than satiated animals in baseline condition (0.65±0.17 and 0.38±0.09pg respectively). There was no statistical difference between these values ($p=0.209$). Normalized noradrenaline levels in 20th min significantly decreased both satiated and fasted groups compared to control ($p=0.012$ and $p=0.027$, respectively). There was no difference in 40th min values. Normalized DHPH levels were not differ compared to control.
CONCLUSION: According to data from this study, systemic glucose administration caused a decrease on noradrenaline concentration in LHA in both satiated and fasted rat. This result demonstrates that noradrenergic neurotransmission in LHA can be modulated by plasma glucose.

OC36

Investigation of the Effects of Irisin Hormone on the Hypothalamic Control of Feeding

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AIM: Hypothalamus undertakes important roles in the control of feeding, and in this center, taking active roles of leptin, ghrelin, neuropeptide Y (NPY), proopiomelanocortin (POMC) and many other peptides controlling feeding behavior is known. Böstrom et al. identified irisin as a myokine in 2012. We reported that intracerebroventricular (icv) irisin infusion caused to increases in food consumption in rat. This study intends to clarify possible effects of the irisin on feeding behavior with gene expression of NPY, POMC UCP2 and their protein levels. The results were expressed median (minimum-maximum).
METHODS: In this study, 40 male Wistar-Albino rats were used. Rats were evenly separated into four groups (n=10). Osmotic mini-pumps were implanted to lateral ventricule and artificial cerebrospinal fluid (vehicle; sham group), 10 and 100 nM concentrations of irisin were infused for 7 days. At the end of the seven day infusion the animals was killed, and the brain tissue was collected. UCP2, POMC and NPY mRNA levels from brains tissues (hypothalamus) and the protein analysis of these genes were determined by Real Time-PCR and Western blot methods, respectively.
RESULTS: Icv irisin infusion reduced POMC levels [Control 0.05 (0.04-0.08); sham 0.04 (0.02-0.12); 10 nM 0.05 (0.04-0.07); 100 nM 0.02 (0.01-0.04) mRNA/β-actin ratio] ($p<0.05$), but it caused to increases in NPY [Control 0.17 (0.13-0.23); sham 0.24 (0.07-0.34); 10 nM 0.24 (0.20-0.55); 100 nM 0.31 (0.25-0.36) mRNA/β-actin ratio] and UCP2 [Control 0.06 (0.06-0.08); sham 0.08 (0.06-0.10); 10 nM 0.14 (0.11-0.15); 100 nM 0.08 (0.08-0.10) mRNA/β-actin ratio] levels in hypothalamus ($p<0.05$).
CONCLUSIONS: The present study results indicate that irisin may have a role on centrally regulation of food intake by stimulating the hypothalamic nuclei.
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OC37

The Effects of Kefir on the Renal Functions of Rats with Streptozotosin Induced Experimental Diabetes Mellitus

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