

age are also examined. Patterns of infant sleep within these groups are also explored.

Methods: In the study, pregnant women were screened for depressive symptoms using the Edinburgh Postnatal Depression Scale (EPDS), and their symptom severity was assessed longitudinally with the Beck Depression Inventory. Women were divided into 6 risk groups: low/stable, intermediate, and high/increasing depression based upon longitudinal symptom severity and medication use. The infant neuroendocrine system was examined using cord blood ACTH and cortisol. These infants were examined at 2 weeks of age using Neonatal Intensive Care Unit Neurobehavioral Scale (NNS).

Results: Infants born to women of the high/increasing depression group had significant elevations in cord blood ACTH at birth. On NNS examination at two weeks, these infants were more hypotonic and less attentive. They habituated to stimuli more quickly and had fewer visual signs and higher skin reactivity. Infants born to women using antidepressants had further elevations in cord blood ACTH, and were found to be more tremulous and excitable during NNS examination. Infants born to women with higher depression severity demonstrating aberrations in their early sleep patterns and sleep entrainment.

Conclusions: Maternal depression risk and antidepressant use may construe a different developmental pathway for development of the infant neuroendocrine axis which may impact early neonatal neurologic development.

P0319

Cortisol as predictor in major depression

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Background: Mild hypercortisolemia is a biological marker found in a subset of patients with major depression. The cause is supposed to be a malfunction in the corticosteroid receptor. Long standing cortisol excess is toxic to nerve cells and especially the hippocampus seem vulnerable to hypercortisolemia. The well known memory and concentration difficulties found in stress and depressive illnesses are supposed to be partly caused by deterioration of the function of the hippocampus.

Methods: The cortisol awakening response(CAR) were measured in saliva by repeated saliva specimens (awakening, 20 min and 60 minutes after awakening) in patient participating in a double blind study using a fixed dosage of sertraline and randomised to either dim or bright light treatment. Cortisol measurements were made before medication and light treatment started. The hypothesis, stated in the protocol, was that saliva cortisol would have a predictive validity of the short term depression outcome.

Results: A statistically significant increase in cortisol levels were found during the first hour after awakening. The area under the curve (AUC) from the CAR results was calculated and was found to have a statistically significant predictive validity for depression scores and remission at endpoint. Thus a statistically significant higher proportion of patient with low CAR values were in remission compared to patient with high CAR values. This effect was predominantly seen in the bright light treated group.

Conclusion: Patients with a high CAR were less likely to attain remission at endpoint. The high CAR seemed to block the effect of light treatment.

P0320

Polyunsaturated fatty acids and depression: Preliminary results of a randomized double blind placebo controlled study

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Many scientific articles suppose a role of omega-3 polyunsaturated fatty acids (PUFA) - particularly eicosapentaenoic acid (EPA; 20:5, n-3) and docosahexaenoic acid (DHA; 22:6, n-3) - as an adjuvant therapy of depression.

We are carrying out a randomized double-blind placebo controlled study - approved by Ethic Committee - to evaluate the adjuvant effect of EPA and DHA in the therapy with paroxetine mesylate, a selective serotonin re-uptake inhibitor (SSRI), in unipolar mood depression and recurrent depression.

In the first phase (T0 baseline), the authors enrolled 20 patients, male or female, between 20 and 60 years old, affected by major depression or recurrent depression according to DSM IV TR. We excluded anticoagulant therapies, pregnancy, concomitant treatment with other drugs and presence of psychotic disorders. The initial plasmatic fatty acid level of cohort of 55 subjects (20 patients and 35 controls) has been evaluated by gas chromatography.

Our preliminary results indicate a general alteration of serum fatty acid levels in depressed subjects compared to healthy subjects, with a high significant statistical difference between the two groups. This difference may help in defining a biological indicator of mood depression. A remarkable different serum fatty acid concentration was still observed, after adjustments regarding diet.

Parker G, Gibson NA, Brotchie H, Heruc G, Rees AM, Hadzi-Pavlovic D. Omega-3 fatty acids and mood disorders. *Am J Psychiatry*. 2006 Jun;163(6):969-78.

P0321

Association of 5HTTLPR with factors related to risk of suicide

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Introduction: The 5HTTLPR polymorphism of the serotonin transporter gene has been found to be significantly associated with suicide and it has also been described that suicidality is associated with increased impulsiveness, aggression and hopelessness. The aim of our study was to investigate the possible association of affective temperaments, hopelessness, aggression, impulsiveness and the 5HTTLPR s allele in a psychiatrically healthy population who have never attempted suicide.

Methods: 135 psychiatrically healthy women participated in the study. All participants completed the Buss-Durkee Hostility Inventory (BDHI), the Barratt Impulsiveness Scale (BIS-11), the Beck Hopelessness Scale and the Temperament Evaluation of Memphis, Pisa, Paris and San Diego questionnaire (TEMPS-A). 5HTTLPR genotypes

were determined by PCR. Results were analysed using Analysis of Covariance and forward stepwise regression.

Results: We found a strong association between the presence of the s allele and the studied characteristics. ANCOVA indicated that there is a strong relationship between Hopelessness and aggressiveness, impulsiveness and affective temperaments. Forward stepwise regression indicated a significant role for depressive temperament, anxious temperament, irritable temperament, hostility and motor impulsiveness in predicting hopelessness. Adjusted whole model R² was 37.61%.

Conclusion: Our study indicates a strong association between the s allele and factors related to increased risk of suicide. Our results show that depressive, anxious and irritable affective temperaments, hostility and motor impulsiveness influence Hopelessness, which has an important predictive role in the emergence of suicidal behaviours. Our results have implication for the recognition and prevention of possible emergence of suicidal behaviours within the healthy, non-depressed population.

P0322

Biological markers of families of patients with neurotic, stress-related and somatoform disorders

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Objective: Study biological markers of families with neurotic, stress-related and somatoform disorders for definition of probability of occurrence of mental disorders.

Methods: 131 families of patients with neurotic, stress-related and somatoform disorders. The clinical and genealogical analysis, immunoferramental analysis for definition of concentration of steroid and thyroid hormones, estimate of processes of apoptosis at receptor and cell-like levels for patients and relatives of the first degree of relationship were carried out.

Results: Spreading of mental pathology among relatives was about 6,85 %. There was the accumulation of repeated cases of similar disorders in these families and basic share of pathology was marked among the first degrees of relationships. Among relatives of patients the group of the raised risk of occurrence of mental disorders is revealed: 1,35 siblings; 1,04 children; 0,3 grandsons; 0,85 spouses corresponds to 1 patient. The statistically significant increased levels of cortisol, triiodothyronin and thyroxine ($p < 0,05$) and the lowered maintenance of dehydroepiandrosteronum ($p < 0,05$) is characteristic for patients in comparison with control. We have observed statistically significant increase of expression of a receptor CD95 in patients in comparison with control ($p < 0,05$). For patients is characteristic the statistically significant increase of levels of spontaneous apoptosis of neutrophils ($p < 0,05$) and lymphocytes. For their relatives is characteristic the tendency to an amplification of this process.

Conclusions: Neurotic disorders are accompanied by features of biological processes, the knowledge of these features will allow rendering assistance with great efficiency.

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P0323

The subclinical thyroid dysfunction: Risk factor for developing the first depressive episode

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Background: Depressive symptoms very often could be the only manifestation of the subclinical thyroid dysfunction (STD). Patients with the STD have the lifetime prevalence of depression approximately double that in the general population and display a lower response rate to antidepressant treatment and greater likelihood of responding to lithium augmentation.

Aims: To assess the stimulate-thyroid hormone (TSH) levels in the first depressive episode (FDE) sample and to evaluate the correlation between severity of depressive symptoms and the TSH levels.

Methods and instruments: The study included 27 patients with FDE (ICD X, F 32) treated in Psychiatric Hospital, University Hospital Zvezdara (Belgrade, Serbia). The exclusion criteria were presence of detected thyroid dysfunction, other psychiatric disorder, chronic somatic disease and/or using drugs. The TSH blood levels were measured. The 21-item Hamilton Rating Scale for Depression (HDRS, scored > 17) was used in order to evaluate the severity of depression.

Results: Mean age in our sample was 48.6 years, with female predominance (55.6 %). We found TSH levels elevated (> 5.5 mEg/L) in 11.1 % (all were females) and decreased (< 0.4 mEg/L) in 11.1 % ($p < .05$). We found positive correlation between the HDRS scores and the TSH measures ($r = .445$, $p < .05$).

Conclusion: The STD is a risk factor for developing the FDE. The greater TSH levels imply the greater severity of the FDE. Each clinician should be aware of possible underlying the STD with its implications on diagnosis, treatment and prognosis of the FDE.

P0324

Hyperactivity of MB-COMT in schizophrenia and bipolar disease: Genetic, Epigenetic and Translation studies

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Background: Fuzzy genetic and environmental associations, variable phenotypes, and difficult to measure symptoms argue for comprehensive pathway studies on neuropsychiatric disease. Here, dopamine metabolism was dissected in the frontal cortex of ill individuals using a combination of measurement.

Methods: The activity of MB-COMT was assessed in 115 post-mortem frontal lobe samples as a function of genotype (VAL158-MET), promoter methylation status, and mRNA level using conventional methods. Also analyzed were the promoter methylation status and mRNA expression levels of DRD1, DRD2, DRD4 and RELN.

Results: MB-COMT promoter methylation was lower, and mRNA expression level higher in patients versus the control subjects ($p = 0.02$). Further, hyper expression of MB-COMT was associated with hypo expression and hyper promoter methylation of DRD1, DRD2 and RELN. An enrichment of the overactive Val allele with MB-COMT hypomethylation in patients vs controls. For example, 87% vs 13%, ill vs well, respectively, were homozygous for Val/Val genotype and had an unmethylated MB-COMT promoter. In contrast, 18% of the samples with Met/Met genotype and a methylated MB-COMT promoter were among the SCZ/BD patients versus 82% in the controls ($p = 0.001$). Preliminary studies on patients suggest, COMT antagonist are useful as adjunct therapeutics.

Conclusions: MB-COMT over-activity from the presence of an hyperactive allele (VAL), or promoter hypo-methylation may increase dopamine degradation in the frontal lobe, fine-tuning of