that high empathisers may be more sensitive to MS involvement in emotional processing.

P0315

Interaction between health behaviour, mental distress and the polymorphism of the serotonin transporter gene among adolescents in Oslo, Norway

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Background and Aim: We have recently found an association between smoking and mental distress in a three year follow up study among Norwegian adolescents. Earlier studies have demonstrated that the serotonin transporter gene interact on the association between negative life events and depression.

The aim of this study is, in stratified analyses by sex, to investigate whether there is a similar interaction of the serotonin transporter genotype on the relationship between smoking and mental distress.

Method: All 10th graders in Oslo in 2000 and 2001 (n=7343, 88%) filled in questionnaires during school classes. The 2001 cohort (n = 3811) constituted the baseline. Of the participants in the baseline study 2489 (65%) participated in the follow-up. The response rate was 58% in boys and 74% in girls. The Hopkin's Symptom Cecklist-10 was used to measure mental distress. At follow up almost all participants provided genetic material using a cyto-brush on the buccal mucosa. The tag SNPs were analysed with Taqman MGB.

Results: There was a significant interaction effect between the different genotype alleles and smoking among girls (F=4.0, p=0.019), but not among boys (F=0.8, p=0.44). Girls that are smoking daily with the long gene allele variant had lower mental distress scores than those with the short allele variant. Those with the heterozygote variant had scores that were between those with the short and long variant.

Conclusion: There is an interaction effect for the serotonin transporter genotype among adolescent girls, but not in boys in the relationship between smoking and mental distress.

P0316

Psychophysiological markers of the patrimonial dominant

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Objects: One of the most often reasons of anomalies development of patrimonial activity is absence of the generated patrimonial dominant.

Methods: The study has been carried out on the basis of a maternity hospital of Chelyabinsk city. Group of 38 pregnant females sorts on term (38-40 weeks). It was lead monopolar electroencephalography on 11 channels with epselateral ear referent electrodes. Record EEG was carried out on standard procedure. The correlation analysis was carried out with the help of statistical package SPSS version 11.0.

Results: Epy interrelation between anomalies of patrimonial activity and average frequency of a beta-rhythm is established at opening eyes (r = 0,450 at p=0,005), an index of a teta-rhythm (r =-0,419 at p=0,009) at closing eyes in left frontal assignment F1.

Conclusions: The revealed direct interrelation of increase of average frequency of a beta-rhythm in the left frontal assignment and increases in probability of occurrence of anomalies of patrimonial activity allows to specify a hypothesis about connection of expressiveness of high-frequency activity in frontal zones of a brain with formation of a patrimonial dominant.

P0317

Serotonin transporter gene and adverse life events in adult ADHD

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Childhood Attention deficit hyperactivity disorder (ADHD) symptomatology persists in a substantial proportion of cases into adult life. ADHD is highly heritable but the etiology of ADHD is complex and heterogeneous, involving both genetic and non-genetic factors. In the present paper we analyzed the influence of both genetics and adverse life events on severity of ADHD symptoms in 110 adult ADHD patients. Subjects were genotyped for the norepinephrine transporter (NET), the Catechol-O-methyltransferase (COMT), the serotonin transporter promoter polymorphism (SERTPR) and the more rare A/G variant within SERTPR. Three main outcomes were obtained: (1) adverse events showed a small but positive correlation with current ADHD severity; (2) NET, COMT and the A/G variant within SERTPR were not associated with ADHD severity; (3) taking into account stressors, the long (L) SERTPR variant showed a mild effect on ADHD, being associated with an increased severity, particularly as regard affective dysregulations; on the other hand, in subjects exposed to early stressors, it showed a protective effect, as compared to the S variant (see table). In conclusion, our data support the role of environmental factors in adult ADHD symptomatology. SERTPR may be involved in some features of the illness and act as a moderator of environmental influences in ADHD.

Total BADDS scores	β	p
Nr. of childhood adverse life events	1.63	0.022
Presence of the SERTPR*S allele	0.34	n.s.
Presence of the SERTPR*L allele	0.68	0.024
Nr. of life events x presence of the SERTPR*S allele	-0.68	n.s.
Nr. of life events x presence of the SERTPR*L allele	-1.19	0.037

Table. **The effect of number of childhood stressors and SERTPR on total BADDS scores (multiple regression analysis).** SERTPR =serotonin transporter promoter polymorphism; BADDS= Brown Attention Deficit Disorder Scale.

P0318

Depression trajectories and medication treatment during pregnancy: Impact on neonatal outcomes

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Aims: This study explores the interplay of maternal depressive symptoms and use of antidepressant medication during gestation on the intranatal development of the infant limbic-hypothalamic-pituitary axis (LHPA). Infant neurologic markers at two weeks of

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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 (NNNS).

Results: Infants born to women of the high/increasing depression group had significant elevations in cord blood ACTH at birth. On NNNS 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 NNNS 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

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