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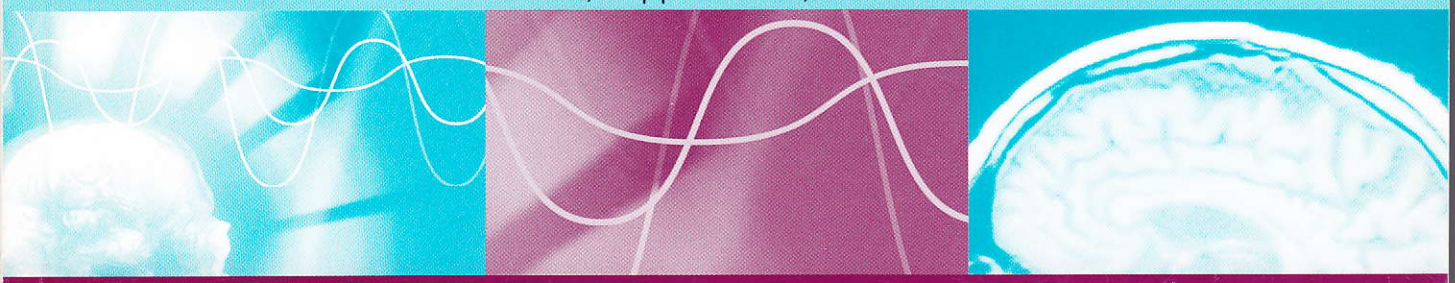

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367 – THE ASSOCIATION BETWEEN SERUM CREATINE KINASE ACTIVITY AND BLOOD CHOLESTEROL LEVELS IN VIOLENT SCHIZOPHRENIA PATIENTS

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Introduction: The aim of the study was to assess an association between mean serum creatine kinase activity (MSCK)and levels of total blood cholesterol (LTBC)in two groups of violent forensic psychiatric offenders:schizophrenia patients (SP) and subjects with personality disorders (PD).
Methods: The study population was 256 violent male psychiatric offenders from the forensic psychiatric department, of whom 214 were SP and 42 were patients with PD. The prevalence of murderers was 21.7% in the SP group and 21.3% in the PD group.
Results: SP had significantly higher MSCK ($p<0.03$) and LDH levels ($p<.05$) then subjects with PD. There were no significant between-groups differences on other biological parameters. No significant differences on these parameters were found between murderers a nd non-murderers in both groups.In overall sample, significant negative correlation was found between MSCK activity and total cholesterol levels ($r = -0.16$, $p<0.05$). Similar correlation pattern was found in the SP group ($r = -0.14$, $p<0.05$), but not in subjects with PD ($r = -0.07$, $p=0.64$).
Conclusions: The results of the study show for the first time an identifiable MSCK/LTBC pattern in violent SP but not in subjects with PD. It is possible that the different character of association between MSCK and LTBC in two groups of violent forensic psychiatric offenders (SP vs.subjects with PD) reflects different biological origins of violent behavior. Further investigation of described MSCK/LTBC pattern in larger population of forensic and non-forensic, psychiatric and non-psychiatric subjects, is warranted.
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Genetics

368 – SERUM BDNF AND mRNA BDNF LEVELS IN SCHIZOPHRENIA

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Introduction: Schizophrenia may be related to dysregulation of synaptic plasticity with downstream alterations of neurotrophins such as brain-derived neurotrophic factor (BDNF) (1). This study aimed to determine the relationship between BDNF (gene expression and serum) levels and negative, positive subtypes of schizophrenia.
Methods: DSM-IV schizophrenia patients were rated by PANNS. Negative subtype was defined as having dominant negative symptoms without positive symptoms since one-year.Serum and lymphocytes were isolated from peripheral blood of 41 schizophrenic subjects and 34 healthy volunteers.Total RNA extracted from lymphocytes of individuals was amplified by RT-PCR.Quantitative real time PCR using SYBR GreenI was used to quantify the expression of BDNF gene. Relative expression was normalized with beta-actin as housekeeping gene. The DeltaDeltaCt method was used for the analysis of relative expression. Serum BDNF levels were measured by ELISA.
Results: BDNF serum levels and mRNA levels were significantly lower in patients with schizophrenia than healthy subjects. There was no difference between positive and negative subtypes of schizophrenia regarding serum and mRNA BDNF levels. There was a negative correlation between BDNF levels and PANSS sub-items (P1delusions, P5grandiosity, P7hostility), Total Positive PANSS Score.
Conclusions: To our knowledge this is the first study that reports BDNF gene expression levels from peripheral blood of schizophrenia patients. We found that that both serum and gene expression levels of BDNF at the peripheral blood is downregulated at schizophrenia patients compared to healthy subjects. Our results support the view that BDNF might have an important role in schizophrenia.
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369 – SHARED GENETICS OF CANDIDATE ENDOPHENOTYPES FOR SCHIZOPHRENIA: MULTIVARIATE HERITABILITY ANALYSIS

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Introduction: Endophenotypes may increase power in genetic research of schizophrenia. Further improvement may be accomplished in multivariate linkage designs, if a shared genetic source underlies the endophenotypes. Therefore, we aimed to investigate potential genetic and environmental correlations among endophenotypes for schizophrenia and IQ.
Methods: Five candidate endophenotypes for schizophrenia showed heritability estimates between 37 and 54% (Aukes et al., in press) and were selected, including: sensorimotor gating (SG), openness (OP), verbal fluency (VF), early visual perception (EVP), and spatial working memory (SWM). In a sample of 180 subjects from 25 multi-