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Unassigned abstracts

HPA axis dysfunction in psychiatry: Genetic background

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HPA axis dysfunction is a key neurobiological finding in major depression (MDD) and in a number of other stress related psychiatric disorders. Hyperdrive of corticotropin releasing hormone (CRH) is at the core of HPA axis dysregulation in MDD. The liability to develop CRH hyperdrive is a complex trait, partially determined by genetic factors. A main functional candidate gene for the regulation of the HPA axis is the gene encoding for the glucocorticoid receptor (GR). Transgenic mice with functional GR gene impairment show profound behavioral changes and elevated plasma corticotropin responses to stress. In humans, several GR polymorphisms were shown to influence HPA axis function. Recently, our group published a positive association finding between polymorphisms in the 5' region of the GR gene and recurrent MDD in two separate populations (1).

The action of the glucocorticoid receptor is tightly regulated by a number of co-chaperones. Binder et al. (2) found significant associations of response to antidepressants and polymorphisms in the FKBP5 gene, a glucocorticoid receptor–regulating co-chaperone of hsp-90.

Several other candidate genes are of interest, such as the CRH receptor 1 and CRH receptor 2 genes, the CRH binding protein gene (3), the AVP receptor gene and the mineralocorticoid receptor gene. These and other genetic determinants of HPA axis function, from our own studies and from the literature, will be discussed.

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Transmission diseqilibrium of chromosome 22q11-13 marks in Chinese Han mixed pedigrees of schizophrenia and mood disorder

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Background: Several genome-wide linkage scans have reported that chromosome 22q11-13 might contain susceptibility loci for both schizophrenia and mood disorder.

Methods: We genotyped 44 Chinese Han family trios with mixed family history of schizophrenia and mood disorder with 11 DNA microsatellite markers on chromosome 22q11-13. These markers spanned 56.55 cM on 22q11-13 with mean intervals of 5.66 cM and average heterozygosity 0.71.The transmission disequilibrium test (TDT) was used to search for susceptibility loci to schizophrenia and mood disorder.

Results: Including all family trios regardless of proband diagnosis, we found six markers associated with susceptibility to psychotic disorders., including D22S420 ($\chi2$=4.76, df=1, P=0.029) %3001D22S277 ($\chi2$=5.44, df=1, P=0.020)%3001D22s315 (allele 5, $\chi2$=7.00, df=1, P=0.008; allele 7, $\chi2$=-4.83, df=1, P=0.028; allele 11, $\chi2$=4.00, df=1, P=0.046)%3001D22S274 (allele 7, $\chi2$=-5.40, df=1, P=0.020; allele 10, $\chi2$=6.23 df=1, P=0.013) %3001D22S1160 ($\chi2$=-4, df=1, P=0.046) and D22S1161 ($\chi2$=5.14, df=1, P=0.023). When grouped separately into schizophrenia and mood disorder according to proband diagnosis, four markers D22S420($\chi2$=7.36, df=1, P=0.007) %3001D22S315 (allele 5, $\chi2$=4., df=1, P=0.046; allele 7, $\chi2$=-8.89, df=1, P=0.003)%3001D22S1161($\chi2$=6.23, df=1, P=0.013) and D22S280 ($\chi2$=4, df=1, P=0.046) were significantly associated with schizophrenia, but were not significantly associated with mood disorder, D22S274(allele 7, $\chi2$=5., df=1, P=0.025; allele 10, $\chi2$=6, df=1, P=0.014) were significantly associated with mood disorder only, and D22S277($\chi2$=4, df=1, P=0.046) was associated with both schizophrenia and mood disorder.

Conclusions: These results indicate that chromosome 22q11-13 contains the susceptibility loci to schizophrenia and mood disorder, and that overlapping regions may be shared by these disorders.

Attitudes of nurses towards schizophrenia

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Objectives: According to the recent literature, stigma connected to schizophrenia has a negative impact on the commencement, process and the outcome of the treatment. The aim of this study was to investigate the attitude of nurses from our local community towards schizophrenia.

Methods: This study engaged 166 nurses (8 male, 158 female) employed at the Clinical Hospital in Osijek and the Primary Medical Care in Osjecko-baranjska County. The subjects have filled out the

Canadian Community Antistigma Questionnaire during 3 mental health lectures for nurses.

Results: Out of total of 166 nurses, 74.7% (124) of them has heard something about schizophrenia in the last couple of months. 45.8% (76) of nurses was employed at the institution that treated patients with mental illness. 34.3% (57) of nurses personally knew someone who was diagnosed with schizophrenia or were treated for schizophrenia themselves. The results have shown an extensive knowledge of the facts related to schizophrenia among the nurses in our local community. It has also emerged that the attitude to the person with schizophrenia is more negative, and the level of stigma is higher as the higher emotional involvement is required.

Conclusion: Medical staff has a good level of knowledge about schizophrenia. Emotional acceptance of the person with schizophrenia is lower as the closer contact is required. Because the results show a certain degree of stigma to schizophrenia in the population of nurses in our local community, it would be necessary to develop specific anti-stigma programs for medical staff.

The Danish OPUS-trial: RCT of standard treatment versus integrated treatment in first episode psychosis. 5 years follow-up

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Aim: To evaluate the effects of integrated treatment for first-episode psychotic patients.

Method: In a randomised clinical trial of 547 first-episode patients with schizophrenia spectrum disorders, effects of integrated treatment and standard treatment was compared. The integrated treatment lasted for two years and consisted of assertive community treatment with programmes for family-involvement and social skills training. Standard treatment offered contact with a community mental health centre. Patients were assessed at entry and after one, two and five years by investigators that were not involved in treatment.

Results: At the one-year and two-year follow-up psychotic and negative symptoms changed in favour of integrated treatment. Patients in integrated treatment had significantly less co-morbid substance abuse, better adherence to treatment, and more satisfaction with treatment. Use of bed days was 22 percent less in integrated treatment than in standard treatment. Results of five-year follow-up will be presented.

Conclusion: Integrated treatment improved clinical outcome and adherence to treatment. The improvement in clinical outcome was consistent in the one-year and two-year follow-ups.

Outcome and its predictors in schizophrenia - The northern Finland 1966 birth cohort

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Background and aims: Follow-up studies of schizophrenia have reported divergent rates of outcomes. In addition to definition and measurement challenges, one reason for divergence may be due to sampling biases. Our aim was to report clinical and social outcomes of schizophrenia in the longitudinal, unselected, population-based Northern Finland 1966 Birth Cohort, and describe associated factors.

Methods: Subjects with DSM-III-R schizophrenia (N=109) were followed prospectively from mid-pregnancy up to age 35 years. Used outcome measures were positive and negative symptoms, global clinical impression, use of antipsychotics, psychiatric hospitalisations, social and occupational functioning. Several definitions of good and poor outcomes were explored, and predictors of outcomes were analysed.

Results: In a subsample of 59 cases with complete information of outcomes, good clinical outcome varied from 10% to 59%, and good social outcome 15-46%, depending on definition of outcomes. Poor clinical outcome varied 41-77% and poor social 37-54%. Two subjects recovered fully using the most stringent definition of outcome. Lack of friends in childhood, father's high social class, lower school performance and earlier age of illness onset predicted poor outcomes. When the whole sample was considered, early infant development around the age of 1 year was associated with worse course of illness.

Conclusions: Outcomes were heterogeneous and relatively poor in this sample of relatively young schizophrenia subjects. The results were influenced by the definitions and measurements of outcomes. Persons having a sub-optimal developmental trajectory with poor social contacts, poor school performance, and early age of illness onset seem to have the worst outcome.

Familial risk and prodromal features of psychosis in adolescents aged 15-16 years in the northern Finland 1986 birth cohort

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Background and aims: Subjects with family history of psychosis and with prodromal symptoms are at risk for schizophrenia. The aim was to study whether adolescents with familial risk have more commonly prodromal features.

Methods: Members (N= 9,215) of the Northern Finland 1986 Birth Cohort, an unselected general population cohort, were invited to participate in a field survey conducted during 2001-2002. At the ages of 15-16 years, the study included a 21-item PROD-screen questionnaire developed for screening prodromal psychotic symptoms with 12 specific questions for psychosis (Heinimaa et al. 2003). The scale measured symptoms for last six months. The Finnish Hospital Discharge Register was used to find out parental psychoses during 1972-2000.

Results: Of the males 24% and 37% of the females were screen positives for prodromal features at the age of 15-16 years. Of the offspring, 1.8% had parents with psychosis. The prevalence of screen positives was 26% in males and 36% in females with familial risk for psychosis.

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