

Molecular and family study in the schizophrenic spectrum

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Aim of the work: to answer the following questions;
whether schizophrenia and/or related spectrum disorders cluster in the first degree relatives of schizophrenic patients.

Does a relation exist between that familial spectral segregation and D3 receptor gene, one of the proposed candidate genes for the inheritance of schizophrenia?

Is there a possibility to find clinical correlates for that genetic linkage?

Study design: not mentioned but can be described as Cross- sectional, case control study.

Method: the study includes 40 schizophrenic patients and 124 individuals of their first degree relatives, compared to 23 healthy controls and 75 individuals of their first degree relatives matched for age, sex, social standard, and ethnicity. All subjects of the study are subjected to; 1- psychiatric interview schedules: ICD-10 symptom checklist for mental disorders and Global Assessment of Functioning (GAF) Scale. 2- Laboratory procedures: blood sampling, DNA extraction and DNA analysis.

Results: the study reveals that there are significantly higher rates of family history of psychiatric disorders among the patients rather than the control group, where 32.5% of first degree relatives have schizophrenia. 12.5% of the first degree relatives of schizophrenic probands have either paranoid personality disorder or even traits, compared to negative history in the relatives of control probands.

Psychiatric morbidity is found in 17.7% of first degree relatives of schizophrenic patients and 1.3% of first degree relatives of control group, very highly statistically significant difference is found between the 2 groups. There's significant degree of deterioration of functioning, education and occupational level in the families of patients rather than those of the control group. There is no linkage between homozygosity at dopamine D3 receptor gene in the schizophrenic patients and presence of heredity for mental disorders. Also, there's no significant difference in the genotype frequency between the families of patients and those of the control group.

Conclusion: schizophrenia is a familial disorder with multi-factorial mode of inheritance. Schizophrenia as well as spectrum disorders are found in significantly higher rates in the families of schizophrenic probands compared to expected rates in random distribution of general population. Families of schizophrenic patients have a degree of impaired function, which denotes a sub-threshold symptom. No association is found between homozygosity at dopamine D3 receptor gene and schizophrenia.