

PATTERNS OF CHILDHOOD SOCIAL DEVELOPMENT IN SCHIZOPHRENIA, BIPOLAR DISORDER AND NORMAL CONTROLS

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Premorbid adjustment was assessed retrospectively in 100 patients with schizophrenia, (DSM-III-R criteria), 49 patients with bipolar disorder and 100 control patients. Mothers were interviewed using the Premorbid Social Adjustment scale. Principal components analysis on the premorbid rating scores revealed two distinct premorbid factors: (1) 'sociability' and (2) 'school performance'. Schizophrenic patients performed significantly more poorly than control subjects ($p < 0.0001$) in both areas. Patients with bipolar disorder differed from controls only for the 'sociability' factor, (factor 1), with a mean score intermediate between schizophrenic subjects and controls. There was little overlap between the distributions of factor scores in the schizophrenic patients and controls. On factor 1, 82% of the schizophrenic patients scored worse than the 75th centile for control subjects. There was no association between premorbid performance and family history of psychosis, obstetric complications or measures of disease severity such as number of admissions, weeks spent as inpatient or age of onset. An association between low birth weight and poor performance on factor 2, (school performance), was specific for schizophrenia. In conclusion, patients with schizophrenia exhibit abnormalities in all areas of social adjustment in childhood and adolescence. This pattern of social maladjustment appears to be an intrinsic part of the schizophrenic process and is independent of disease outcome.

A TWO YEAR FOLLOW UP STUDY OF THE FIRST 50 PATIENTS TO START CLOZAPINE IN RAMPTON HOSPITAL

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Clozapine is the only antipsychotic drug that has been shown to be consistently superior to other antipsychotics in the treatment of patients with severe chronic schizophrenia. Despite the potential importance of this new treatment, there have been relatively few studies of the effectiveness of Clozapine in offender patient samples.

Case notes of the first 50 patients to start Clozapine in Rampton hospital (a psychiatric hospital for the treatment of patients in conditions of maximum security) were examined retrospectively. The severity of positive symptoms, negative symptoms, violent behaviour and self-harming behaviour were rated according to four-point scales (none, mild, moderate, severe) derived from established instruments. Clinical ratings were made at the start of treatment and after 6, 12 and 24 months.

The mean age (SD) at first contact with psychiatric services was 21 years (4.2).

The mean age (SD) on admission to Rampton Hospital was 30 years (8.2).

The mean age (SD) on starting Clozapine was 39 years (8.8).

Prior to starting Clozapine, the ratings of positive symptoms were severe 88%, moderate 12%. The ratings of violent behaviour were severe 19%, moderate 29%, mild 17%, none 35%.

At one year follow up, 60% had less severe positive symptoms and 50% showed less severe violent behaviour.

At two years follow up; 42% had been discharged (or referred and subsequently accepted for transfer to a less secure hospital), 31% continued Clozapine in Rampton Hospital and 27% had stopped Clozapine.

The rate of response to Clozapine in this sample was similar to that seen in other reported series and confirms that Clozapine represents a major advance in the management of treatment-resistant schizophrenia.

DERMATOGLYPHIC ABNORMALITIES IN SCHIZOPHRENIA

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Background: Fingerprints and palmar creases are formed during the late first/early second trimester of foetal development.

Method: We examined the finger and palm prints of 148 patients (100 M, 48 F) with DSM III-R schizophrenia and 89 (41 M, 48 F) healthy controls of the same ethnic group. Quantitative variables measured included: individual finger ridge counts, total and absolute finger ridge counts and the AB ridge count for each hand. Qualitative variables measured included: fingertip patterns (arch, loop or whorl), interdigital patterns, palmar (thenar and hypothenar) patterns, palmar creases and distal finger creases.

Results: Patients had a significantly lower mean left AB ridge count (39.0 vs 42.0, $p = 0.006$), lower mean right AB ridge count (38.8 vs 41.0, $p = 0.04$), significantly ($p = 0.01$) fewer patterns in the 4th right interdigital, fewer single distal creases on the right index finger (45% vs 55%, $p = 0.01$) and a different proportion of fingertip patterns on the same finger (patients having more arches and less whorls, $p = 0.06$) than controls.

Logistic regression revealed left AB ridge count ($p = 0.007$) and fourth right interdigital pattern reading ($p = 0.03$) to be the best predictors of patient/control status.

Conclusion: These findings support the view that intrauterine development is abnormal for some people who later develop schizophrenia.

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P300: A MARKER FOR GENETIC VULNERABILITY TO SCHIZOPHRENIA

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It has been proposed that schizophrenia can be classified into familial and sporadic based on the presence or absence of family history of psychosis. Previous studies have shown that there is a reduction in P300 amplitude and an increase in P300 latency in schizophrenics and a subgroup of their first degree relatives. We examined 33 schizophrenic patients and 67 of their first degree relatives from families with at least two affected members as well as 29 schizophrenics and 50 of their first degree relatives without any family history of psychiatric disorder and compared them to 35 normal controls. Our objective was to investigate whether P300 amplitude and latency would contribute in differentiating between these groups. Family history was obtained from the patients, their relatives and normal controls by personal interview. Auditory P300 responses were obtained by using the standard two-tone discrimination paradigm. The following results are from P300 responses to target stimuli at the Pz site. 1. There was no difference between P300 latency or amplitude between the controls and the relatives of the non-familial cases. 2. Relatives of the familial cases showed increased latency ($p = 0.012$) and decreased amplitude ($p = 0.021$) as compared to controls. Furthermore, there was a bimodal distribution for the P300 latency in this population. 3. In familial schizophrenics, P300 latency was

increased ($p = 0.003$) and amplitude was decreased ($p = 0.001$) compared to controls. 4. In non-familial schizophrenics, there was no significant prolongation of P300 latency. P300 amplitude was decreased but this was not statistically significant. These findings point out to P300 latency prolongation as a trait marker for familial schizophrenia that could help clarify the endophenotypic status of non-affected members in genetic studies.

ABNORMAL INVOLUNTARY MOVEMENTS IN SCHIZOPHRENIA; PREVALENCE IN TREATED AND FIRST EPISODE SAMPLES

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Aims. To establish the prevalence of tardive dyskinesia in a sample of patients with schizophrenia attending our catchment area rehabilitation centre and to establish a baseline rate of spontaneous involuntary movements in first episode schizophrenia in the same catchment area.

Method. Sixty patients (28 M, 32 F) with DSM-III-R schizophrenia were randomly selected and assessed for dyskinetic movements using the Abnormal Involuntary Movements Scale (AIMS). Patients were also assessed for their level of positive and negative symptoms using the Scale for Assessment of Positive and Negative Symptoms respectively (SANS & SAPS), by a second investigator, blind to the AIMS score. Forty-five patients (28 M, 17 F) presenting over a 2 year period with first episode DSM-III-R schizophrenia were also assessed for dyskinetic movements at presentation using the AIMS scale. Tardive dyskinesia and spontaneous involuntary movements were diagnosed in both samples according to the research diagnostic criteria of Schooler and Kane.

Results. The day patient sample had a mean age of 36.6 years (s.d. 12.4 years). Fifteen patients satisfied Schooler and Kane criteria for tardive dyskinesia (prevalence rate 25%). Those with tardive dyskinesia did not differ in terms of gender, positive symptoms or current neuroleptic dose but were significantly older ($p = 0.02$) and had more negative symptoms ($p = 0.02$). The sample of 45 patients with first episode schizophrenia had a mean age of 27.8 years (s.d. 9.5 years). Two patients satisfied Schooler and Kane criteria for spontaneous involuntary movements (prevalence rate 4.4%).

Conclusions. Tardive dyskinesia occurs in a significant proportion of patients with schizophrenia during the course of their illness (25%). In this sample dyskinetic patients were older and had more negative symptoms. Spontaneous involuntary movements exist in a small proportion of patients with schizophrenia at first presentation prior to treatment with neuroleptics. We suggest that the majority of patients with schizophrenia who develop abnormal involuntary movements do so during the course of their illness and treatment.

HUMAN DOPAMINE D4 GENE EXPRESSION USING THE RIBONUCLEASE PROTECTION ASSAY

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The recent cloning and characterisation of multiple dopamine receptors, has revitalised the dopamine hypothesis of Schizophrenia, and has provided an opportunity to examine the mechanisms regulating their function in normal and disease state. The regional distribution and level of expression of dopamine receptor subtype mRNA is a potential mechanism for regulation of dopamine receptor function,

an abnormality of which, is thought to underlie the neuropathology of Schizophrenia.

In a first series of experiments we have undertaken to determine the quantitative distribution of selected dopamine genes in control post mortem brain utilising the Ribonuclease Protection Assay (RPA) technique which allows us to visualise the gene expression of multiple receptors from the same anatomical region of interest and compare them quantitatively.

We have generated a D4 specific riboprobe spanning the 3' end of the coding region and used it to detect D4 mRNA expression in poly(A) + RNA extracted from selected subcortical regions from control post-mortem brain. We also used a Glyceraldehyde 3 Phosphate Dehydrogenase (GAPDH) riboprobe as an internal standard.

D4 mRNA was predominantly expressed in the retina and was detected in most of the brain regions examined including both motor and limbic areas.

These findings argue against a predominantly limbic distribution of the D4mRNA in human brain, and might be of help in understanding the mechanism of action of novel dopamine receptor selective antagonists that might have antipsychotic properties.

NR14. Clinical aspects of affective disorders/suicide and self-harm

Chairmen: T Craig, J Neeleman

TRANSCULTURAL RESEARCH ON DEPRESSION — STUDY CONCEPT AND PRELIMINARY RESULTS FROM A KENYAN POPULATION

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The goals of our transcultural study on depression were the investigation of symptom profiles, depressive core symptoms and culture specific varieties, influencing psychosocial factors and personality aspects. A polydiagnostic approach including self rating and observer rating instruments, respectively international and culture specific instruments was chosen in order to investigate out-patients with major depression. Translation of the self rating instruments was done in a 3 step translation procedure. A culture specific questionnaire (NOK) was developed in which we laid emphasis on the symptoms not included in the international scales, as well as on the culture-specific expressions and metaphors. The initial study of this project was carried out in Kenya. 75 depressed patients and 50 healthy controls were examined by Beck Depression Inventory (BDI), Hopkins Symptom Checklist (SCL-90R), Clinical Global Impression (CGI), Hamilton Depression Scale (HAMD), Munich Personality Test (MPT) and African Depression Scale (NOK). According to ICD-10 criteria, 44 patients suffered from Major Depression, 4 patients were diagnosed as bipolar, 22 had Dysthymia, 6 patients could not be classified. The differences in average age did not reach significance. In the observer-rating (HAMD) as well as in the self evaluation scales (BDI, SCL-90R), one of the most important symptoms was somatization. In contrast to some other authors is the high percentage of patients with depressed mood (95%) and guilt feelings (65%). The NOK shows the highest correlation with the self-rating scales measuring somatization like the corresponding factor in SCL-90