PSYCHIATRIC MORBIDITY IN THE FAMILIES OF PARANOID AND NON-PARANOID SCHIZOPHRENIA PATIENTS

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ABSTRACT

A total of 1018 and 812 first degree relatives (FDR) of schizoprencies and controls respectively, were studied to find out the psychiatric morbidity in the families of paranoid and non-paranoid schizophrenia patients. The risk of schizophrenia and affective disorders was found to be independent of the probands subtype diagnosis. The risk for schizoid-schizotypal and paranoid personality disorders was found to be increased in the first degree relatives of paranoid schizophrenic, as compared to non-paranoid schizophrenic, thus suggesting that the psychopathology in the FDR may differ with the subtype diagnosis of the proband.

Keywords : Paranoid schizophrenia, first degree relatives, morbidity risk.

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INTRODUCTION

The families of schizophrenics have long been suspected of having psychiatrically abnormal members although they may not be psychotic. Weiner[1] reported that only 10% of schizophrenics have a family history of schizophrenia and about 25% have a schizoid personality. Bleuler[2] maintained that latent schizophrenics were many times more common than those with overt illness. Kallmann[3] reported schizoidia in about one-third of the offsprings of schizophrenics and in a lesser proportion of their siblings. In a large family study in Berlin Kallmann[3] investigated the families of 1087 patients. The overall expectancy rate for siblings was 11.5% but it was higher for the siblings of nuclear (catatonic, hebephrenics) cases than for peripheral (paranoid) ones. Kendler and Davies[4] examined nine studies that studied the risk for schizophrenia in the relatives of schizophrenic probands divided into subtypes. Five of these studies found that the relatives of paranoid schizophrenic probands had a significantly lower risk of schizophrenia than the relatives of non-paranoid schizophrenic while a few studies could not find the same results. Subsequently, one family study[5] found a significantly higher risk for schizophrenia in relatives of paranoid versus non-paranoid schizophrenics.

In the light of this controversy this study was planned to study the psychiatric morbidity in the first degree relatives of paranoid and non-paranoid schizophrenic patients.

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MATERIAL AND METHODS

The sample of the study consisted of 162 schizophrenic probands drawn from the inpatient Department of Psychiatry, University Hospital, Banaras Hindu University, Varanasi, admitted on specified beds between September 1987 to April 1990. They fulfilled the DSM-III Criteria[6] for schizophrenic disorders, were between the age of 16-50 years, and willing to participate in the study. The first degree relatives (FDR) of these patients formed the sample of the present study. The controls were FDR of 106 surgical patients admitted in the Department of Surgery of the same hospital. The control probands, were matched with the patient group; scored less than two on mental health itemsheet[7] and were not suffering from any psychiatric illness.

The FDR of 162 patient of schizophrenia and 106 controls were studied in detail. The Screening Schedule[7] was administered to the key relative of the proband to find out the psychiatric symptomatology in the relatives. Detailed evaluation of the FDR was done according to the Family History-Research Diagnostic Criteria (FHRDC)[8] administered to the key relatives. The schizophrenic probands were subtyped according to DSM-III criteria. They were grouped into paranoid and non-paranoid groups. Since FHRDC contains only antisocial personality disorders, the FHRDC for schizophrenia related personality disorders[9] was utilized for diagnosing schizoid, schizotypal and paranoid personality disorders.

RESULTS

A total of 1830 first degree relatives (FDR) were studied in detail. Of these 1018 were patients' FDR and 812 were relatives of controls. The patients' and controls' FDR did not differ significantly with regards to age, sex, domicile, marital status, education, occupation and economic status. Psychiatric morbidity was observed in 34.8% and 9.2% of FDR of patients' and controls' respectively. This difference was statistically significant (Table I).

Table I - Psychiatric Morbidity in FDR of Probands

	Patients FDR		Controls FDR		Total
	No	%	No	%	
Sick	354	34.8	75	9.2	429
Healthy	664	65.2	737	90.8	1401
	1018		812		1830

$x^2 = 164.53$; d.f. = 1 ; $p < 0.001$

Table II - Morbidity Risks of Psychiatric Disorders in Relatives of Paranoid and Non-Paranoid Schizophrenic Probands

Psychiatric Disorders	Paranoid Schizophrenics			Non-Paranoid Schizophrenics			x^2	P
	N	BZ	MR	N	BZ	MR		
1. Schizoid-Schizotypal P D	33	126.5	26.1	78	506.5	15.4	8.0	<0.001
2. Chronic Schizophrenia	12	126.5	9.5	51	506.5	10.1	0.5	N.S
3. Affective disorder	9	95	9.5	45	392.5	11.5	0.5	N.S
4. Cannabis use disorder	4	126.5	3.2	18	506.5	3.6		
5. Drug use disorders (others)	7	126.5	5.5	17	506.5	3.4	2.8	NS
6. Alcoholism	8	126.5	6.3	15	506.5	3.0		
7. Antisocial P D	2	184.5	1.1	4	775.0	0.5		
8. Paranoid P D	6	126.5	4.7	4	506.5	0.8	7.8	<0.01
9. Neurotic disorder	5	126.5	4.0	15	506.5	3.0	0.1	N.S
10. Others	7			14				

BZ = Bezugsziffer (age-adjusted size of the sample)

MR = Morbidity risk

The morbidity of psychiatric disorders in the FDR of paranoid schizophrenics are detailed in Table II. The morbidity risk for schizotypal personality disorders was highest (morbidity risk 26.1) followed by schizophrenia(9.5), affective disorder (9.5), alcoholism (6.3) and drug use disorder (5.5) and paranoid personality disorder (4.7). But when these figures were compared with those of the FDR of the non-paranoid schizophrenics and statistical test applied, it was found that only schizoid schizotypal personality disorders and paranoid personality disorders were significantly increased in paranoid schizophrenic groups (Table II).

DISCUSSION

The present study investigated the psychiatric morbidity in the first degree relatives of paranoid and non-paranoid schizophrenic patients. Psychiatric morbidity was observed in 34.8% of the FDR of schizophrenic patients as compared to 9.2% of the FDR of controls. The prevalence rates for psychiatric disorders in the patients' FDR are more or less comparable to the rates observed by several authors[10,11]. Baron et al [12] observed a high morbidity risk at 60% in the FDR of chronic schizophrenic patients, but their patients had a lower age of onset than other studies.

The present study also sought answers to whether the risk of schizophrenia and the pattern of non-schizophrenic illness is different in FDR as a function of the subtype of the proband diagnosis. Kendler and Davis[4] noted nine studies that examined the risk for schizophrenia in relatives of schizophrenic probands divided into subtype, five of these studies found that relatives of paranoid schizophrenic probands had a significantly lower risk for schizophrenia than did the relatives of non paranoid schizophrenic probands. Four studies found no significant variation in the risk of schizophrenia in the relatives of probands with different subtypes, whereas Ungvari[5] found a significantly higher risk for schizophrenia in the relatives of paranoid versus non-paranoid schizophrenic patients. In this study the risk of schizophrenia did not differ in the relatives of probands with the subtypes of schizophrenia. Moreover, no evidence was found for a higher risk for affective disorder in relatives of paranoid versus non-paranoid schizophrenic probands. This finding is consistent with the findings of other investigators [4,13] who reported that neither the risk for schizophrenic nor the risk for all non-affective psychotic conditions differed in the relatives of probands with the various subtypes of schizophrenia.

The morbidity risk for schizoid-schizotypal and paranoid personality disorders was observed to be highest in the FDR of paranoid schizophrenics as compared to the relatives of other schizophrenic subtypes. These findings suggest that the psychopathology in FDR may differ with the subtype diagnosis of the probands. However, this finding is in contrast with the study of Kendler et al[13] who reported that paranoid and non-paranoid schizophrenic probands had similar risk for schizophrenic and affective illness. They could not find any evidence for familial factors specific to individual subtypes.

In conclusion, the risk of schizophrenic and affective disorder is independent of the probands subtype diagnosis while the risk for schizoid-schizotypal and paranoid personality disorders is increased in the FDR of paranoid schizophrenics, as compared to non-paranoid schizophrenics.

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BOOK REVIEW

MODELS OF AUTOIMMUNITY IMMUNOLOGICAL REVIEWS 1990 NO. 118

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Over the years concepts about the mechanisms whereby autoimmune diseases arise have changed considerably. Research on tolerance and autoimmunity is presently undergoing an explosive stage and a large amount of interesting data has recently been published. This issue of the Immunological Reviews series covers the significant recent advances.

The chapters are not organised in any particular sequence and there is considerable overlap in some chapters. Nevertheless readers are treated to a comprehensive review. The molecular basis for the HLA association with autoimmune diseases is discussed in Chapter 1. Several chapters are devoted to the possible mechanisms of T cell self-tolerance and the development of autoimmunity. These have included the recent knowledge gained for the use of transgenic animal models. Chapter 5 discusses T cell receptor repertoire expression in murine models of SLE. The pathogenesis of SLE is further discussed in Chapter 6 as a model of generalised autoimmunity. A fair portion of the book is taken up by studies on type II collagen autoimmunity and heat shock protein in arthritis. For the reader looking for possible application of these new developments, the chapter on antigen recognition and peptide mediated immunotherapy in autoimmune disease is most encouraging.

This book serves as a useful review for the clinician with an interest in autoimmunity as well as students of immunology.

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