Psychiatric Disorders in First Degree Relatives of Probands with Bipolar Mood Disorder

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Original Article

Abstract

Background: To determine the frequency of psychiatric disorders in the first degree relatives (FDRs) of probands with bipolar mood disorder.

Methods: One hundred bipolar probands were consecutively recruited from outpatient and inpatient departments of Psychiatry, Jinnah Postgraduate Medical Centre (JPMC) using ICD-10 diagnostic criteria for Bipolar mood disorder, and Urdu version of Present State Examination (PSE). Having recorded basic socio demographic details, psychiatric morbidity in total of 300 first degree relatives were collected by using Family History Research Diagnostic Criteria (FH-RDC) and transferred on Performa for statistical analysis.

Results: Out of the 300 first degree relatives of bipolar probands, 34% had psychiatric disorders, Depressive disorder being the commonest found in 9% first degree relatives, followed by bipolar mood disorder in 7% first degree relatives, drug use disorder in 6% first degree relatives, antisocial personality in 5% first degree relatives, alcoholism in 2% first degree relatives, chronic schizophrenia in 2% first degree relatives, schizoaffective disorder in 1.67%, unspecified psychosis in 0.67% and other psychiatric disorders in 1% first degree relatives. These were common in the age group of 15-24 years.

Conclusion: The psychiatric disorders aggregated amongst the first degree relatives of bipolar probands were depressive disorder (with the highest frequency) followed by bipolar mood disorder, schizophrenia, schizoaffective disorder, drug use disorder, alcoholism and antisocial personality disorder.

Key Words: Bipolar disorder, Family history

Introduction

The concept of inheritance is imbibed in every religion, culture and society. Early studies in the laws of inheritance revealed that these were the ideas that led to genetic studies and transformed into modern day projects. Inheritance is the cause and disorders are effects. Research clearly shows that both ‘nature’ and ‘nurture’ play an essential role in the genesis of psychopathology. Basic genetic epidemiology is statistical and descriptive method in psychiatric genetics. Bipolar mood disorder or manic depressive illness is a debilitating mental illness in which the core feature is pathological disturbance in mood ranging from extreme elation or mania to severe depression usually accompanied by disturbance in thinking and behaviour which may include psychotic symptoms, such as delusions and hallucinations. Typically it is an episodic illness usually with complete recovery between the episodes.

There have been methodological impediments to precise quantification, but the approximate life time risk of Bipolar disorder in first degree relatives of bipolar proband was 5-10% as compared to general population (0.5-1.5%). Bipolar mood disorder presents with symptoms that overlap with other often co-morbid psychiatric disorders such as borderline personality disorder, substance abuse disorder, unipolar depression, and quite often co-occurs with medical disorders. The most common co-morbid axis I disorders are ‘Anxiety’ and ‘Substance abuse’ disorders. Both of these disorders occur in approximately 30-50% of patients with Bipolar mood disorder.

Patients and Methods

This was a cross sectional study conducted at the Department of Psychiatry, Postgraduate Medical Centre (JPMC), Karachi, for a period of 6 months from May 2006 till November 2006. The total sample was 100 patients who were consecutively recruited including patients of both gender aged 15 years and above, diagnosed with bipolar mood disorder through semi-structured interviews based on ICD-10 diagnostic criteria for bipolar mood disorder. Patients with severe cognitive impairment, with history of central nervous system disorders i.e temporal lobe epilepsy, and with acute, severe disturbance of behavior were excluded. A total sum of 300 first degree relatives of probands with Bipolar mood disorder, who agreed to participate in the study, were inducted, having obtained informed consent.
written consent. The selected participants were administered Family History- Research diagnostic Criteria (FH-RDC), an instrument providing consistent set criteria to diagnose major psychiatric disorders of first degree relatives.

Results

The mean age of the bipolar probands was 34.74 ± S.D 8.21 years with an age range of 24-60 years. There were 41 (13.7%) females and 62 (20.7%) males, with a male:female ratio of 1.5: 1. Out of the 300 first degree relatives of bipolar probands, 103 (34%) had psychiatric disorders, depressive disorder being the commonest (9%)(Table 1).

**Table 1: Distribution of psychiatric disorders amongst first degree relatives of bipolar probands**

<table>
<thead>
<tr>
<th>Psychiatric disorder</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressive Disorder</td>
<td>27(9)</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>21(7)</td>
</tr>
<tr>
<td>Drug use disorder</td>
<td>18(6)</td>
</tr>
<tr>
<td>Antisocial personality</td>
<td>15(5)</td>
</tr>
<tr>
<td>Alcoholism</td>
<td>6(2)</td>
</tr>
<tr>
<td>Chronic Schizophrenia</td>
<td>6(2)</td>
</tr>
<tr>
<td>Schizoffective disorder</td>
<td>591.6</td>
</tr>
<tr>
<td>Unspecified functional psychosis</td>
<td>2(0.6)</td>
</tr>
<tr>
<td>Other psychiatric disorder</td>
<td>3(1)</td>
</tr>
<tr>
<td>No psychiatric disorder</td>
<td>197(66)</td>
</tr>
</tbody>
</table>

Discussion

This study determined the distribution of psychiatric illnesses as defined by FH-RDC in the first degree relatives of bipolar proband. Family studies using standardized diagnostic criteria such as FH-RDC have consistently shown that the bipolar disorder aggregates in the families of bipolar proband. In the present study the rate of distribution of bipolar disorder was higher i.e 7% in first degree relatives of bipolar proband. It is consistent with the findings of Craddock and Owen in which the approximate lifetime risk in First degree relatives of bipolar proband was ranging between 5-10%. In another study by Shih and Zandi, the rates ranged from 3-15%. Peralta et al found that the life time prevalence of bipolar disorder was 0.24%. As compared to studies by Angst 1996, Mc Guffin and Katz 1989, in which 11.4% of first degree relatives had unipolar depression, the rates found in the present study were comparatively low (9%). Bipolar studies have identified increased risk of unipolar depression ranging from 20-30%. One of the explanations of the under reporting could be the methodological limitation of the family history method in which information regarding the illness of the first degree relatives was obtained indirectly from the proband. Other reasons for decreased rates could be the use of different diagnostic criteria.

In the DSM-IV consensus and SCID interview based study of Arajarvi R et al, the life time prevalence of Schizophrenia was 1.5%. As compared to the general population, the rates of schizophrenia in First degree relatives of bipolar proband was higher (2%) in this study which suggest the familial aggregation of Schizophrenia and bipolar disorder. This is consistent with other family studies by Craddock et al and Goel DS. In comparison to the rates of alcoholism (40%) and drug use disorders (70%) found by Ostacher MJ and Sachs GS, the rates of substance abuse (6%) and alcoholism (2%) were significantly low in this study. One likely possibility could be under reporting due to stigma attached with addiction, also the information has been collected from the proband indirectly rather than directly from the patient, which could have led to this bias in the findings.

References