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First Rank Symptoms in Mania: An Indistinct Diagnostic Strand

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Abstract

Introduction: First rank symptoms (FRS) are considered to be pathognomic for Schizophrenia. However, FRS is not distinctive feature of Schizophrenia. It has also been noticed in affective disorder, albeit not inclusive in diagnostic criteria.
Its existence in the first episode of bipolar disorder may be predictor of poor short-term outcome and decompensating course of illness.
Objective: To determine the frequency of first rank symptoms in manic patients.
Method: The cross sectional study was done at psychiatric services of Aga Khan University Hospital, Karachi, Pakistan. 120 manic patients were recruited from November 2014 to May 2015.FRS was assessed by administration of validated Urdu version of Present State Examination (PSE) tool.
Result: The mean age of the patients was 37.62 $\pm$ 12.51, and the patient less than 35 years had 69.6% FRS with p-value of 0.009. The mean number of previous manic episode was 2.17 $\pm$ 2.23. 11.2% males and 30.6% females had FRS. This association of first rank symptoms with gender in patients of mania was found to be significant with a p-value of 0.008. All-inclusive, 19.2% exhibited FRS in their course of illness. 43.5% had thought broadcasting, made feeling, impulses, action and somatic passivity. 39.1% had thought insertion, 30.4% had auditory perceptual distortion, and 17.4% had thought withdrawal. However, none displayed delusional perception.
Conclusion: The study confirms the presence of FRS in mania in both male and female, irrespective of the duration of current manic illness or previous number of manic episodes. A substantial difference was established between both the genders and association of younger age with FRS.

INTRODUCTION

First rank symptoms (FRS), coined by Kurt Schneider, are considered pathognomic for schizophrenia in the International Classification of Disease, tenth revision (ICD-10).[1] However, the recent data suggests that it is not distinctive of schizophrenia. It is also prevalent in other mental illness like personality disorder and mania.[2]

The prevalence of FRS in mania varies from 29 to 63%.[3] The wide ranged frequency of FRS in mania makes it difficult to differentiate from schizophrenia.[4] A high rate of FRS in patients with manic or mixed episode was found with a higher frequency in men (31%) than in women (14%). The monotonic increase in the association between FRS and younger age was apparent.[5]

In first episode of mania with psychosis, 12.9% had audible thoughts, 56.4% had auditory hallucinations, and 59% had passivity of feelings.[6] FRS at onset of illness shows poor clinical outcome in terms of complete recovery and have worse over all course of illness.[7,8]

FRS can help clinician recognize the patients at risk at early stage.[9] The most recent 20 year longitudinal study of schizophrenia and bipolar disorder indicates FRS at the acute phase is not a clinicopathologic, specific to schizophrenia.[10] The intermix features of both disease not only lead to misdiagnosis but can put patient at risk for inadequate management, delayed appropriate treatment and poor prognosis. Nonetheless, early detection and appropriate management may improve the prognosis.

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The data on FRS in bipolar patients in Pakistan is scarce. It will be imperative to know the frequency as well as transcultural differences of findings in comparison to previous data. In the absence of reliable biological markers, clinical interview based on diagnostic criteria remains the key to accurate diagnosis. This study may establish the basis for more research in developing countries in this area to have revised diagnostic criteria.

OBJECTIVE

The primary objective is to determine the frequency of FRS in patients with Mania, who were under treatment at psychiatry service at tertiary care hospital in Karachi.

The secondary objective is to assess frequency of each symptom of FRS in comparison to previous data and in context of socio-demographic factors.

METHODOLOGY

Design & Site of the study: This is a cross-sectional study, conducted at psychiatric service of Aga Khan University Hospital, Karachi, Pakistan. A sample of both gender, suffering from manic episode or bipolar affective disorder currently mania with or without psychosis, based on ICD-10 criteria, was drawn. Patients were recruited from November 2014 to May 2015.

Selection

Non-probability purposive sampling technique was used. 120 patients were recruited, keeping 95% confidence interval and considering margin of error of 6%. The sample was calculated in reference to study showing prevalence of audible thought in mania in round figure of 13%.[6]

Ethical Consideration

After the approval of proposal by Ethical Review Committee of Aga Khan University Hospital, the study was conducted in controlled clinical setting. Confidentiality was maintained by keep the personal information to primary investigator. The statistical data was accessed only by research coordinating committee. Informed written consent was taken with autonomy to withdraw at any point if they wish to. The concluding finding was communicated to interested participants.

PROCEDURE

Inclusion Criteria

- Patients with diagnosis of manic episode with or without psychosis or bipolar affective disorder, currently mania with or without psychosis, based on ICD-10 criteria were recruited
- Consenting patients aged 18-60

Exclusion Criteria

- Patient who were unable to read or understand Urdu
- Patient with comorbid such as schizophrenia, substance abuse, depression with psychosis, anxiety disorder and brain organicity were excluded.
- Patients who were medically unstable to share information

Patients were recruited based on inclusion criteria. Principle investigator collected the data using the questionnaire that included age, gender, education, occupation, and duration of current manic episode, history and number of previous manic episode. Urdu version of Present State Examination (PSE) tool was used to assess the FRS.[11] The tool has robust sensitivity and specificity.[12]

Statistical Analysis

We used SPSS version 21 for statistical analysis. Descriptive statistics are expressed as mean +SD or rate (%). Multivariate analysis was performed using binary logistic regression analyses with FRS as dependent variable against age, gender, occupation, marital status, duration of current manic episode and history of previous manic episodes. A P-value < 0.005 was considered to indicate statistical significance.

RESULTS

Among 120 cases, there were 71 males (59.2%) and 49 females (40.8%). Out of these 8 males (11.2%) and 15 females (30.6%) had FRS. This association of FRS with gender in patients of mania was found to be significant with a p-value of 0.008. The mean age of the patients was 37.62+ 12.51 and of previous manic episodes was 2.17 + 2.23. Patient with age less than 35 had 69.6% FRS, with p-value of 0.009. Majority (87%) was educated up to graduation/ post graduation. (Table 01) The correlation of marital status, education, occupation, duration of current manic episode and history of previous manic episodes was not found to be significant. The short duration of illness didn't find to be protective factor of FRS. (Figure 01) All-inclusive, 23 patients (19.2%) had FRS. Regarding individual frequency of FRS, thought broadcasting and made feeling, action and somatic passivity were found in 10 (43.5%) patients. Thought insertion was found in 9 (39.1%) patients. Seven patients (17.4%) displayed voices in discussion, commentary, and audible thoughts. Four patients (17.4%) showed thought withdrawal while none exhibited delusional perception. (Table 02)

DISCUSSION

It's been well studied in the west that FRS doesn't occur exclusively in schizophrenia.[13-16] Nevertheless, it is the

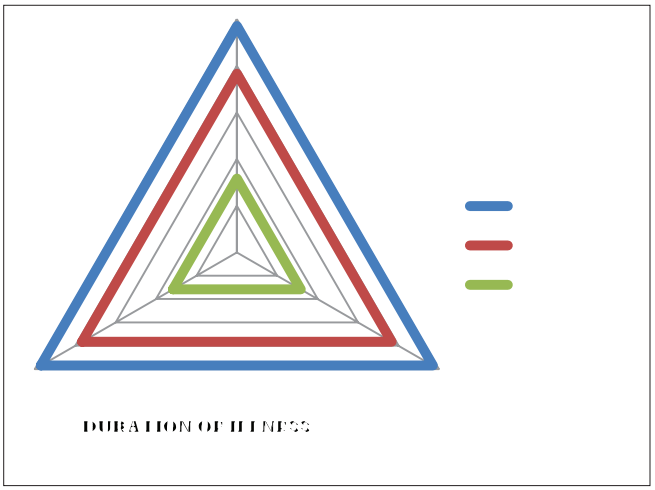

Figure 1: Duration of illness and frequency of frst rank symptoms (FRS) in mania

Table 1: Descriptive statistics

Variables	First Rank Symptoms: N (%)	p-value
Age		
<35 years	16 (69.6)	0.009
>35 years	07 (30.4)	
Gender		
Female	15 (30.6)	0.008
Male	08 (11.2)	
Marital status		
Never married	10 (28.6)	0.093
Ever married	13 (15.3)	
Occupation		
Employed	55 (45)	0.473
Unemployed	65 (55)	
Education		
Illiterate	02 (40)	
Secondary	03 (16)	0.620
Intermediate	09 (21)	
Graduate/Postgraduate	09 (16.7)	
Duration of current episodes		
Less than 1 month	55 (48.5)	
1-3 months	46 (38.3)	0.230
>3 months	19 (15.8)	
History of previous manic episodes	91 (75.8)	0.811

Table 2: Frequency of first rank symptoms in mania

Frequency of First Rank Symptoms	N (%)
All-inclusive-FRS	23 (19.2)
Voice in discussion, voice commentary, audible thoughts	07 (30.4)
Thought broadcast	10 (43.5)
Thought withdrawal	04 (17.4)
Thought insertion	09 (39.1)
Made feeling, made impulses, made action, somatic passivity	10 (43.5)
Delusional perception	0 (0)

first study in Pakistan on this subject. The discrepancy in our findings from west makes it debatable to consider the transcultural variations and facets to determine FRS.

The prevalence of FRS (19.2%) in our study is less than reported in previous data (29-63%). The audible thoughts are more frequently reported (30.4%) than previous studies (12.9%). On the contrary, auditory hallucinations (30.4%) and somatic passivity (43.5%) were less prevalent than the one reported earlier 56.4% and 59% respectively.[17] Thought broadcasting was more frequently reported than in study done on FRS in schizophrenia in Pakistan. However, delusional perception was conspicuous by its absence in our study as in more recent studies.[11]

It's been ascertained that there is variation in prevalence of individual symptoms of FRS. The overall lower frequency raise the question of influence of variation in cultural values and beliefs. This may be in correspondence to the study done in Srilanka that determined higher prevalence of cultural and sub cultural beliefs among ethic minorities might contribute toward lower prevalence of FRS.[18] However, our study didn't address cultural or sub cultural beliefs on either general or ethnicity basis.

The age and gender were significantly associated in our study; women and patient with age less than 35 were more likely to display FRS. This is in contrast to study done on schizophrenia, in which FRS tended to be in older group with occupational dysfunctionality[11] and men tended to have more FRS.[5] Nonetheless, other demographic variables found to have no significant relation with FRS. This finding is similar to Egyptian study.[19]

24.2% patients didn't have any previous manic episode. Among them, 5% had FRS in their first episode. It will be pivotal to determine further the course of illness of the patients with FRS in first episode. Moreover, it will be of significance to know the overall prognosis of patients with early onset of illness and FRS in first episode.

It came across discernibly that short duration of illness didn't play a protective effect against FRS; the shorter it was, the more association there was with the presence of FRS. It may support the idea that acute stage of illness is characterized by florid psychotic symptoms so probably FRS are in fact representative of a more severe form of psychosis.20Therefore, longer duration of illness may have attenuated FRS by treatment.

In developing countries, language is an important parameter to clinically assess the psychiatric patient since language barrier may notably affect the outcome. The screening tool used in our study was validated Urdu version that was primary language of all the patients. It reduced the risk for miscommunication at large. This is imperative as one Australian study found that patients

with good command on their primary language were more likely to display FRS.[21]

Strength of the Study

This is the first study done in Pakistan to determine the prevalence of FRS in mood disorders. This has allowed comparison between findings of west vs. our region. The important differences in socio-demographic can form a basis in future for longitudinal research in this direction i.e. measurement of quality of life or short/long term outcomes in patients suffering from mania with FRS. This will help in knowing prognostic significance of FRS in mood disorders.[20]

This study draw attention to the need of using structured clinical interview like PSE in our routine practice. This will help in recognizing FRS in mania at early stage and timely and adequately manage it if prognosis of mood disorder is to be improved.

Limitation

Data was collected from tertiary care hospital that caters the patients of divergent socio-economical background. Nevertheless, the limited sample size from one setting is a crucial deterrent of this study. It will be contentious to generalize the result unless the similar study can be done on larger scale at public sector hospitals. The outcome might have been affected because of the limitation of the study design to adjust confounders. It doesn't establish grounds to impart causation between variables.

CONCLUSION

This study confirms the presence of substantial frequency of FRS in manic patients in both male and female, with significant difference established between both the genders and age younger than 35.FRS transcends cultural barriers. However, it has a considerable variation in their prevalence and individual frequencies in different culture. Either strategy should be reinforced in the clinical settings to screen patients suffering from mania for FRS or diagnostic criteria may be revised for appropriate clinical assessment.

Conflict of Interest

The authors declare that they have no competing interest.

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