

Symptom Spectrum in First-Episode Psychosis

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Abstract: The formation of the concept of ‘First-episode Psychosis’ dates back to 1983, when the term was first used to describe patients suffering from schizophreniform disorder who were followed till the development of schizophrenia. Though initially it referred to first-episode schizophrenia, gradually it stood as an independent diagnosis as the early intervention in psychosis services developed world-wide. Owing to the lack of consensus regarding the definition of the first-episode psychosis, various researchers operationalised the definitions for an individual study. This resulted in incomparability of the researches amongst themselves. However, the new label, often used in the early intervention services has been very useful to address the problem in its infancy, decreasing the possibility of more extensive psychological, social and biological damage in the early critical period of the illness. Still none of our classificatory systems have set the diagnosis criteria for first-episode psychosis due to lack of evidence based knowledge, which can be gathered step by step from such small researches. This particular observational study held in outpatient department of of psychiatry at post-graduate institute of behavioural and medical sciences used diagnostic tools like ICD 10 DCR, Present Status Examination and Brief psychiatric rating scale. SPSS version 16 calculated the percentage. Results show that majority of the patients of first-episode psychosis can be diagnosed as having schizophrenia(58.7%) as well as acute and transient psychotic disorders(32.7%). Most of them have positive symptoms like hallucinations, delusions and irrelevance in speech, which should be targeted as soon as elicited regardless of the diagnosis to improve the long-term outcome of the patients.

Keywords: Symptom spectrum, First-episode psychosis.

INTRODUCTION

Schizophrenia being chronic illness with deteriorating course, till 1990’s much of the research focused on later stages of schizophrenia [1,2]. The long-term outcome of a patient suffering from a psychotic illness depends on the course in the initial stages of the illness [3]. This led to the development of early intervention in psychosis services to target this critical period. Biological, psychological and social factors are most malleable during first five years of onset of symptoms, when there is maximum deterioration [4]. Hence, the term “first episode-schizophrenia” was introduced. The definition of “first-episode schizophrenia varied across researches [5]. From first admission [6,7] to first symptom experience[8] to first formal diagnosis.

The ICD-10[9] and DSM IV[10] published broader definition of schizophrenia as compared to the diagnostic manuals of the time [11]. To cover the spectrum of schizophrenic and psychotic illnesses the

term first-episode psychosis was coined. Psychosis can be described as a syndrome that includes positive symptoms like hallucinations and delusions as well as negative symptoms or mood disturbances [12]. The term first-episode psychosis is more useful in early intervention in psychosis services as there is no need to fulfill the duration of illness criteria required for a diagnosis of schizophrenia [12]. There is no single definition for first episode-psychosis that is followed by all the researchers. In this particular study first-episode psychosis is considered as an occurrence of psychotic symptoms in any person for the first time in his life. It includes all the psychotic illnesses, i.e. acute and transient psychosis, schizophrenia, persistent delusional disorders, mood disorders like mania or depression with psychotic symptoms. Very few studies describe the types of symptoms encountered during first-episode psychosis. This particular study aims at exploring distribution of symptoms in first-episode psychosis.

MATERIALS AND METHODS

Patients from the out-patient department of psychiatry in “Post Graduate Institute of Behavioural and Medical Sciences”, Raipur diagnosed as having first-episode psychosis and between 18 – 60 years of age were included in the study after taking written informed consent. Here, the operational definition of first-episode psychosis considered any first-episode of non-affective, affective and any other non-organic psychotic illnesses as first-episode psychosis. Onset of illness was categorized into:

- Abrupt - onset within a period of 48 hours or less.
- Acute – onset within a period of 2 weeks or less.
- Insidious - onset occurring in more than 2 weeks.

Clinical datasheet was used to collect the data. Symptom profile of patients diagnosed as First-Episode

Psychosis was validated using the Present Status Examination (PSE)[13]. It is a 140 item scale. Patients were assessed on Brief Psychiatric Rating Scale (BPRS)[14] for their symptom severity. Its 18 items are rated on a seven-point item-specific likert scale from 0 to 6, with the total score ranging from 0 to 108 (in some scoring systems, the lowest level for each item is 1, and the range is 18 to 126). ICD-10-DCR[15] criteria were used to establish the diagnosis. Co-morbidity in the form of physical disorder, intellectual impairment, organic disorder or substance use were excluded. Statistical Package for Social Sciences (SPSS 16.0) windows version was used for statistical analyses. Data obtained were analyzed using descriptive statistics. Percentages were calculated for each symptom.

RESULTS

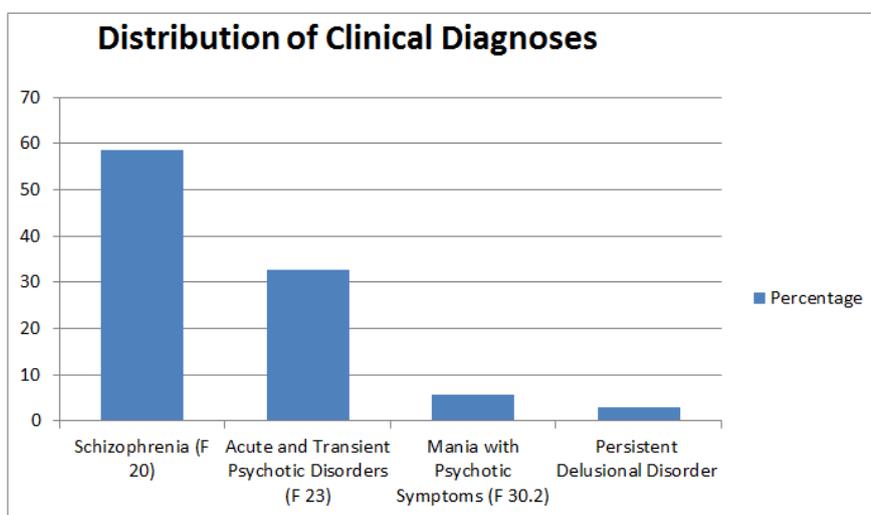


Fig-1: Distribution of Diagnosis in First-Episode Psychosis

Out of 137 patients who were contacted, written informed consent could not be obtained from 6 patients and there was inadequate information from 27 patients. 58.7% patients received diagnosis of schizophrenia, while 32.7% patients

received diagnosis acute and transient psychotic disorder, 5.8% patients suffered from mania with psychotic symptoms and 2.9% patients were diagnosed with persistent delusional disorder as per ICD-10-DCR criteria.[Figure 1]

Table-1: Clinical Details of Patients

Variables		n	%
Mode of onset of illness	Abrupt	25	24
	Acute	74	71.2
	Insidious	5	4.8
Duration of illness	<1 month	43	41.3
	1-3 months	38	36.5
	3-6 months	12	11.5
	6 months-1 year	11	9.7
Family history of psychiatric illness	Absent	72	69.2
	Present	32	30.7
Types of psychiatric illnesses in family members	Not known	10	9.6
	Acute and Transient Psychosis	5	4.8
	Schizophrenia	13	12.5
	Alcohol Use Disorders	4	3.8

Results in table-1 indicate that majority of patients (71.2%) were having acute onset followed by (24%) abrupt & (4.8) insidious onset in the present study. Most of the patients (77.8%) approached the doctor within 3 months, 11.5% approached within 6 months and 9.7% reached the doctor after a year. 30.7% of the patients did have a positive family history of a

psychiatric illness, amongst which schizophrenia was found to be most common, which accounted 12.5% of patients. Exact diagnosis of the psychiatric illness in a family member was not known for 9.6% of patients. 4.8% patients had family history of acute and transient psychosis and 3.8% of patients had that of alcohol use disorders.

Table-2: Clinical Symptoms in Patients Suffering from Schizophrenia

Variable	n	%
Thought echo, thought insertion or withdrawal, or thought broadcasting	6	5.8
Delusions of control, influence, or passivity, clearly referred to body or limb movements or specific thoughts, actions, or sensations ; delusional perception	5	4.8
Hallucinatory voices giving a running commentary on the patient’s behaviour, or discussing the patient among themselves, or other types of hallucinatory voices coming from some part of the body	40	38.5
Persistent delusions of other kinds that are culturally inappropriate and completely impossible (e.g. being able to control the weather, or being in communication with aliens from another world)	7	6.7
Persistent hallucinations in any modality, when occurring every day for at least 1 month, when accompanied by delusions (which may be fleeting or half-formed) without clear affective content, or when accompanied by persistent over-valued ideas	7	6.7
Neologisms, breaks, or interpolations in the train of thought, resulting in incoherence or irrelevant speech	14	13.5
Catatonic behaviour, such as excitement, posturing or waxy flexibility, negativism, mutism, and stupor	4	3.8
“Negative” symptoms, such as marked apathy, paucity of speech, and blunting or incongruity of emotional responses (it must be clear that these are not due to depression. or to neuroleptic medication)	31	29.8

Table-2 shows that amongst the symptoms, the symptoms belonging to the third category, i.e. Hallucinatory voices giving a running commentary on the patient’s behaviour, or discussing the patient among themselves, or other types of hallucinatory voices coming from some part of the body, was most commonly found. 40 patients, i.e. 65.6% out of all the schizophrenic patients, had this symptom, followed by negative symptoms, such as marked apathy, paucity of speech, and blunting or incongruity of emotional responses (these are not due to depression or to neuroleptic medication) was present in 29.8% of the total sample and 50.8% patients from all the patients suffering from schizophrenia. Neologisms, breaks, or interpolations in the train of thought resulting in incoherence or irrelevant speech was present in 13.5% of patients. 6.7% patients showed symptoms like

persistent delusions of other kinds that are culturally inappropriate and completely impossible (e.g. being able to control the weather, or being in communication with aliens from another world) and persistent hallucinations in any modality, when occurring every day for at least 1 month, which are accompanied by delusions (which may be fleeting or half-formed) without clear affective content, or accompanied by persistent over-valued ideas. Thought echo, thought insertion or withdrawal, or thought broadcasting was present in 5.8% of patients and delusions of control, influence, or passivity, clearly referred to body or limb movements or specific thoughts, actions, or sensations; delusional perception was present in 4.8% patients, while catatonic behaviour, such as excitement, posturing or waxy flexibility, negativism, mutism, and stupor was present in 3.8% of patients.

Table-3: Clinical Symptoms in Patients with Persistent Delusional Disorder

Variable	n	%
Delusions, other than those listed as typically schizophrenic in criterion G1(1)b or d for F20.0-F20.3 (i.e. other than completely impossible or culturally inappropriate). The commonest examples are persecutory, grandiose, hypochondriacal, jealous(zelotypic), or erotic delusions	3	2.9
Transitory or occasional auditory hallucinations that are not in the third person or giving a running commentary	0	0
Depressive symptoms	1	1

Table-3 shows that 2.9% of patients fulfilled the criteria for persistent delusional disorder where delusions, other than those listed as typically schizophrenic in criterion G1 (1) b or d for F20.0-F20.3 (i.e. other than completely impossible or culturally inappropriate) was present. The commonest examples

are persecutory, grandiose, hypochondriacal, jealous (zelotypic), or erotic delusions. None of the patients with this diagnosis had transitory or occasional auditory hallucinations that are not in the third person or giving a running commentary. Only one of them showed depressive symptoms.

Table-4: Clinical Symptoms in Patients with Acute and Transient Psychotic Disorder

Variable	n	%
Delusions	25	24
Hallucinations	22	21.2
Incomprehensible or Incoherent Speech	12	11.5
Perplexity	11	10.6
Misidentification	3	2.9
Impairment of Attention and Concentration	11	10.6

It is clear from table-4 that 32.7% patients were diagnosed as having acute and transient psychotic disorder. Out of these patients 70.6% (24% out of the total sample) patients had delusions, 62.4% (21.2% out of the total sample) had hallucinations, 33.8% (11.5% out of the total sample) patients showed

incomprehensible or incoherent speech, 31.2% (10.6% out of the total sample) exhibited perplexity, 8.5% (2.9% out of the total sample) patients had misidentification as a symptom and 31.2% (10.6% out of the total sample) had impairment of attention and concentration.

Table-5: Clinical Symptoms in Patients with Mania with Psychotic Symptoms

Variable	n	%
Elated, Expansive or Irritable Mood	6	5.8
Increased Activity or Physical Restlessness	6	5.8
Flight of Ideas or the Subjective experience of Thoughts Racing	4	3.8
Loss of Normal Social Inhibitions, resulting in behaviour that is inappropriate to the circumstances	3	2.9
Decreased Need for Sleep	5	4.8
Inflated Self-esteem or Grandiosity	6	5.8
Distractibility or Constant Changes in Activity or Plans	2	1.9
Behaviour that is Foolhardy or Reckless and whose Risks the Individual does not Recognize, e.g. Spending Sprees, Foolish Enterprises, Reckless Driving	2	1.9
Marked Sexual Energy or Sexual indiscretions	3	2.9
Delusions (Grandiose, Self-Referential, Erotic or Persecutory content) or Hallucinations	6	5.8

It can be seen from the table-5 that 5.8% patients were diagnosed as having mania with psychotic symptoms, and all of them had elated, expansive or irritable mood, increased activity or physical restlessness, inflated self-esteem or grandiosity along with delusions (grandiose, self-referential, erotic or persecutory content) or hallucinations. 4.8% patients had decreased need for sleep, 3.8% patients had flight of ideas or the subjective experience of thoughts racing,

and 2.9 % patients had shown loss of normal social inhibitions, resulting in behavior that is inappropriate to the circumstances, marked sexual energy or sexual indiscretions in the course of their illness. 31.9% patients had distractibility or constant changes in activity or plans, behaviour that was foolhardy or reckless and whose risks the individual does not recognize, e.g. spending sprees, foolish enterprises, reckless driving.

Table-6: Suicidal Ideation in Patients

Variable	n	%
Nil	80	76.9
Mild	7	6.7
Moderate	5	4.8
Severe	3	2.9
Could Not Be Assessed	9	8.7

Table-6 indicates that 15 patients, i.e. 14.4% patients in our sample had suicidal ideas. 6.7% patients had mild suicidal ideas, 4.8% had moderate and 2.9%

had severe suicidal ideas. 8.7% patients could not be assessed for suicidal ideas.

Table-7: Personality Disorders in Patients

Variable	n	%
Schizoid Personality Disorder	7	6.7
Dissocial Personality Disorder	2	1.9
Emotionally Unstable Personality Disorder- Borderline Type	1	1

It is evident from the table-7 that 11.5% patients had a co-morbid personality disorder. 6.7% patients had co-morbid schizoid personality disorder which is consistent with the earlier writings. 1.9% patients had dissocial personality disorder and 1% showed emotionally unstable personality disorder – borderline type.

DISCUSSION

This particular study focused on symptom profile of the first-episode psychosis patients in order to recognise them early to intervene on time that would result in better outcome.

Clinical details

Majority of patients (71.2%) had acute onset of illness in comparison to 24% showing abrupt onset and only 5 % of them accounting for the insidious onset. It can be reasoned out that may be patients with insidious onset are not noticed by the family members, majority of whom are illiterate, or not educated enough to recognise slight abnormality in behaviour which could be due to some mental illness. In a study done by Gomez-de-Regil *et al.* [16] published in 2010, 61% of first-episode patients had a sudden or acute onset and 39% had insidious onset. Insidious onset of illness is associated with the longer duration of untreated psychosis [17].

Majority (77.8%) of the patients consulted us within 3 months of the onset of illness. Average duration of illness before taking psychiatric consultation for patients in this sample was 3.11 months, which is similar to a Zambian study, in which duration of illness for 50% of patients was less than 1 month. This may be because initially most of them approach a faith healer, which is still more common practice in Chhattisgarh and rural areas. It is difficult for the family members to believe that the abnormal behaviour of the patient is due to some mental illness, and not due to some demonic possession. Similarly the trend was found to be common in Zambia. One of their studies shows the result that one third of their patients had been to the traditional healers before reaching a doctor [18].

Family history of a mental illness was present in 30.7% patients. Majority (12.5%) had a family history of schizophrenia followed by acute and transient psychotic disorder and alcohol abuse, while for 9.6% of patients, diagnosis of mental illness in the family was not known. It can be explained from the results of a systematic review of the studies published during the period 1980 to 2003, which found that the first degree relatives of probands to have a higher morbidity risk for schizophrenia as compared to the relatives of controls. Estimates ranged from 2 to 9 percent (in studies that adjusted for time at risk using Weinberg, Stromgren, or Kaplan-Meier methods) compared to a morbidity risk in the relatives of controls at about 0.5%. The effect varied according to the diagnostic classification employed in

the study, with broader definitions of schizophrenia, such as Research Diagnostic Criteria, tending to show larger estimated effects than the narrower definitions employed in post-third editions of the Diagnostic and Statistical Manual of Mental Disorders (DSM). There was also evidence of clinical heterogeneity, with the relatives of early onset cases having a higher morbidity risk compared to the relatives of late onset cases. Most family studies have investigated morbidity risk in first degree-relatives; the few studies of second- and third-degree relatives suggest an increase in risk with increasing relationship closeness, the structural form of which may not be linear [19].

Thus it can be said that first-episode psychosis patients are mostly suffering from schizophrenia with acute onset and 3 months mean duration with family history of mostly schizophrenia, acute and transient psychotic disorder and alcohol abuse and duration of 1 month between precipitating factor and occurrence of psychotic episode.

Hallucinatory voices giving a running commentary on the patient's behaviour, or discussing the patient among themselves, or other types of hallucinatory voices coming from some part of the body, was most commonly found. 65.6% out of all the patients suffering from schizophrenia had this symptom. 38.5% patients in our whole sample of first-episode patients had this symptom, followed by negative symptoms, such as marked apathy, paucity of speech, and blunting or incongruity of emotional responses (these are not due to depression or to neuroleptic medication) was present in 29.8% of the total sample and 50.8% patients from all the patients suffering from schizophrenia.

Neologisms, breaks or interpolations in the train of thought, resulting in incoherence or irrelevant speech were present in the 13.5% of the patients, i.e. in 23% patients from all the patients suffering from schizophrenia. Persistent delusions of other kinds that are culturally inappropriate and completely impossible (e.g. being able to control the weather, or being in communication with aliens from another world) and persistent hallucinations in any modality, when occurring every day for at least 1 month, when accompanied by delusions (which may be fleeting or half-formed) without clear affective content, or when accompanied by persistent over-valued ideas were present in 6.7% of patients (11.5% of all patients suffering from schizophrenia). 5.8% patients (9.8% of all patients suffering from schizophrenia) showed the symptoms like thought echo, thought insertion or withdrawal, or thought broadcasting. Delusions of control, influence, or passivity, clearly referred to body or limb movements or specific thoughts, actions, or sensations; delusional perception had been present in 4.8% of patients (8.2% of patients suffering from schizophrenia). 3.8% of patients (6.6% of all the

patients suffering from schizophrenia) had catatonic behaviour, such as excitement, posturing or waxy flexibility, negativism, mutism, and stupor.

2.9% of patients fulfilled the criteria for persistent delusional disorder where delusions, other than those listed as typically schizophrenic in criterion G1 (1) b or d for F20.0-F20.3 (i.e. other than completely impossible or culturally inappropriate) was present. The commonest examples are persecutory, grandiose, hypochondriacal, jealous (zelotypic), or erotic delusions. None of the patients with this diagnosis had transitory or occasional auditory hallucinations that are not in the third person or giving a running commentary. Only one of them showed depressive symptoms.

32.7% patients were diagnosed as having acute and transient psychotic disorder. Out of these patients 70.6% patients had delusions, 62.4% had hallucinations, 33.8% patients showed incomprehensible or incoherent speech, 31.2% exhibited perplexity, 8.5% patients had misidentification as a symptom and 31.2% had impairment of attention and concentration.

5.8% patients were diagnosed as having mania with psychotic symptoms, and all of them had elated, expansive or irritable mood, increased activity or physical restlessness, inflated self-esteem or grandiosity along with delusions (grandiose, self-referential, erotic or persecutory content) or hallucinations. 83.3% patients had decreased need for sleep, 66.7% patients had flight of ideas or the subjective experience of thoughts racing, and 50 % patients had shown loss of normal social inhibitions, resulting in behaviour that is inappropriate to the circumstances, marked sexual energy or sexual indiscretions in the course of their illness. 33.3% patients had distractibility or constant changes in activity or plans, behaviour that was foolhardy or reckless and whose risks the individual does not recognize, e.g. spending sprees, foolish enterprises, reckless driving.

14.4% patients in this study had suicidal ideas. This may be explained with findings of suicidal ideation in schizophrenia patients, they being in majority in the present study. According to Kaplan and Sadock[17], 20-40% patients of schizophrenia may attempt suicide. Suicide rate in the schizophrenics is between 5-10%, with the risk being higher in the early course of the illness. According to OPUS study, hallucinations and suicide attempt before inclusion in the study were the most significant predictors of suicide attempt in the follow-up period. In one of the studies, approximately 25% of the sample reported a current desire to kill themselves and 47% had made one or more previous attempts. Path analysis indicated that greater hopelessness and longer duration of illness increased risk. Hopelessness was associated with higher negative self-evaluation and social isolation [20]. Suicidality is

high in schizophrenia, particularly in first-episode patients. Little is known about patients with prodromal symptoms of psychosis or otherwise high-risk persons. In a sample enrolled in an early intervention program implemented in Milan (Italy), a history of attempted suicide before enrolment was found in 6 first-episode schizophrenia (out of 87, 6.9%), and 7 high-risk of psychosis (out of 81, 8.6%) patients. In the first-episode group, a history of suicide attempts was related to a shorter duration of untreated psychosis [21].

In this particular study, 5% patients had very mild symptoms 7% patients had mild symptoms 23% patients had moderate symptoms, 44% patients had moderately severe symptoms, i.e. lower than the result found by Chakraborty *et al.* [22] in 2009 which was 51.8% first-episode patients having moderately severe symptoms. Patients having severe symptoms consisted 13% and the remaining 8% patients had extremely severe symptoms.

Personality disorder was present as comorbidity in 11.5% patients. 6.7% patients had comorbid schizoid personality disorder, 1.9% patients had dissocial personality disorder and 1% showed emotionally unstable personality disorder – borderline type. These can be explained with the earlier studies that reported higher level of cluster A and cluster C characteristics especially avoidant personality disorder among the first-episode schizophrenia patients and cluster B characteristics in the patients with first-episode nonschizophrenia psychoses [23,24]. Most of the studies relating personality disorders to psychosis are done on the patients suffering from schizophrenia. Hogg *et al.* [25] in 1990 showed that schizotypal, antisocial, and borderline personality disorders were the most common personality disorders in schizophrenia on the basis of informant interviews with the Structured Interview for DSM-III Personality Disorders but that dependent, narcissistic, and avoidant personality disorders were the most common personality disorders on the basis of data from a self-report inventory. Another study that used the Structured Interview for DSM-III Personality Disorders reported an association of schizotypal and antisocial personality disorders with schizophrenia[26]. Bernstein *et al.* [26] in 1997 found that the prevalence of cluster A personality disorders was significantly lower when the rater was blind to patients' clinical information than when the rater was not. A study from the United Kingdom that used a semistructured interview to rate premorbid personality according to ICD-9 classifications demonstrated that premorbid schizoid, paranoid, and explosive traits were more common in patients with schizophrenia than in patients with other nonorganic psychoses[23]. Associations involving personality disorders, particularly an association between antisocial personality disorder/sociopathic traits and schizophrenia could be seen [27].

In this study, the sample consisted of 58.7% patients suffering from schizophrenia, 32.7% patients diagnosed as having acute and transient psychotic disorder, 5.8% diagnosed as having mania with psychotic symptoms and 2.9% were suffering from persistent delusional disorder as per the criteria given in ICD-10-DCR criteria. Findings are in similar to Jager *et al.* [28] who used ICD-10 for the diagnostic purpose in their research on first-episode psychosis and found that majority i.e. 80.2% patients were diagnosed as suffering from schizophrenia (F20), 13.2% from acute and transient psychotic disorder (F23), 4.1% from schizoaffective disorder (F25) and 2.5% from other types of psychosis (F21,F22,F24,F28). Distribution of diagnosis in a study done by Malla *et al.* [29] in 2002, using the DSM IV criteria, was as follow: Substance induced psychosis – 10%, Psychosis not otherwise specified – 21%, Schizophrenia or related psychosis – 62%, and other psychosis – 6%. In both of these studies though they have used different diagnostic criteria, patients with schizophrenia were in majority. Morgan *et al.* [30] in 2006 found the following distribution pattern in the diagnosis in AESOP study: Non-affective psychosis – 75.2% in London, 68.5% in Nottingham and 72.5% in Bristol, manic psychosis – 13.6% in London, 12.7% in Nottingham and 10.5% in Bristol, depressive psychosis – 11.2% in London, 19% in Nottingham and 19.3% in Bristol. At a community mental health service in London following data were available, 73.2% patients suffered from schizophrenia and related disorder, 14% from affective psychosis and 12.8% from drug related psychosis. 40% were diagnosed as suffering from schizophrenia or schizophreniform disorder [19]. It was found that first-episode schizophreniform disorder was more common in the males like first-episode delusional disorder and first-episode psychosis NOS. But first-episode brief psychotic disorder was more common in females [31].

CONCLUSION

It can be concluded from this particular study that majority of patients suffering from first-episode psychosis receive diagnosis of schizophrenia followed by acute and transient psychotic disorders. Thus, symptoms of schizophrenia are more widely distributed amongst this group of patients. Target symptoms for early intervention can be any kind of hallucinations and delusions along with irrelevance in speech. Control in these positive symptoms in the early phase can improve the overall outcome of the illness subsequently.

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