

Prodrome in Childhood and Adolescent Mania

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Abstract

Objectives: This study was conducted to find the average duration of prodrome in childhood and adolescent mania, to ascertain the symptoms, and to assess the difference in duration of prodromes on the basis of sex, mood, and age.

Patients and Methods: This was a prospective study of 30 consecutive patients aged 19 years or younger who had had a manic episode or bipolar affective disorder, manic type according to the International Classification of Diseases-10. A checklist was applied for symptoms of mania and other associated symptoms. The duration between the first symptom and the manic episode was taken as the prodrome.

Results: The mean duration of prodrome was 14.9 days. A significantly longer prodromal period was found for the age group 12 to 16 years than for the age group 17 to 19 years (mean, 22.9 days vs 7.9 days). Decreased sleep and increased self-esteem were among the most common prodromal symptoms.

Conclusion: Caregivers can be sensitised to early warning symptoms so that treatment can be initiated early to prevent a full-blown manic episode and/or admission to hospital, thereby influencing the course and prognosis of the manic episode.

Key words: Adolescent, Bipolar disorder, Child

Introduction

The term prodrome indicates a forerunner of an event.¹ In other words, a prodrome is the period that elapses between the occurrence of the first symptoms and the fully developed illness. The appearance of prodromal symptoms has been important in clinical medicine for many progressive and treatable diseases in which early detection and timely treatment are crucial. Except for schizophrenia, research into prodromal symptoms in psychiatry has been largely anecdotal.¹⁻⁵

Recent studies have concentrated on identifying symptoms of mania early in the evolution of the episode.⁶⁻⁸ Social workers have been encouraged to detect early relapses and refer such patients to minimise the undesirable consequences of career damage, financial loss, unwanted pregnancy, and impaired relationships.⁹

In one study, 40 adult patients with mania and depression were interviewed on the prodromes for mania and

depression and how these prodromes were managed.¹⁰ The authors reported that, for patients with bipolar disorder, their level of functioning in the areas of work, marital relationships, parenting abilities, and social functioning was related to how well they managed the prodromes of mania. The recognition of prodromal symptoms is becoming more important, as highlighted by the emergence of psychoeducational programmes for partners of patients with bipolar mania.¹¹ The National Institute of Mental Health working parties highlighted the need for research and the development of methods for psychological intervention in bipolar affective disorder,^{12,13} an obvious candidate being early intervention during the prodrome.

Several methodological problems are involved in the exploration of prodromes in affective disorders.^{1,2} Studies have equated hospital latency — the time of onset of the first symptom to the point of admission to hospital — as that of evolution or prodrome.^{14,15} In 1988, Molnar et al defined prodrome as the period from onset of the first symptom to maximum intensity — a definition that is consistent with the concept of evolution.⁶ Meanwhile Keitner et al asked the patients and guardians to list the symptoms before the onset of the manic episode — a concept consistent with prodrome.⁸

There have been many methods of eliciting symptoms during evolution. Studies have asked the patients to report symptoms of prior episodes^{6,8} or have used a symptom checklist.⁷ Other methods include dating the symptoms using the Present State Examination¹⁵ and longitudinal Brief

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Psychiatric Rating Scale administration.¹⁶ Use of a symptom checklist might facilitate recall by the informant but would result in missed symptoms not included in the checklist. Asking the informants to recall the symptoms would result in some symptoms being missed due to the time delay. Further, many data would be generated making it difficult to sort into categories. A better design would be to use a symptom checklist to facilitate recall along with an open column for unlisted symptoms.

Another methodological issue comprises the source of the information. Previous researchers have interviewed patients and/or corroborated the information with the relatives' help.^{6-8,15} Although it has been reported that patients retain insight after the onset of illness,⁷ other researchers have noted that insight is lost from the earliest symptoms.⁹ Insight, if present, is transient and patients with mania are notoriously refractory to self-examination and treatment.¹⁷ Thus, even if a patient is able to recollect episodes, it becomes incumbent on the caregivers to identify an impending relapse and to help patients seek treatment.

The use of prophylactic drugs could affect the development of an episode of mania and this aspect is not mentioned in most studies.⁶⁻⁸ While many patients are receiving drugs,^{15,16} it is necessary for them to be drug-free for the index episode for which they are evaluated so that the assessment of prodrome is accurate. Other methodological problems include assessment strategies (prospective or retrospective) and confounding symptoms such as premorbid traits and subclinical fluctuations of mood in chronic affective conditions such as bipolar disorder.^{5,10}

The recommendation for indefinite, life-long treatment has been successfully challenged for schizophrenia¹⁸ and questioned by some authors for bipolar illness.¹⁹ Therefore, identification of prodromal symptoms early in the course of the illness may be useful for intermittent use of lithium,⁹ enabling recurrences of affective disorder to be treated earlier and perhaps more effectively.⁶

Previous findings have indicated that mania can begin in very early childhood. Some parents have reported that symptoms of mania had always been present, but were unable to establish an exact age of onset.²⁰ This finding is consistent with the finding of insidious onset reported in early onset bipolar disorder²¹ and that it is sometimes preceded by minor oscillations in mood or mild cyclothymic mood swings.²¹

Early psychosis has often been equated with early schizophrenia. As a consequence, first-episode (FE) affective psychosis has been relatively neglected. Mania, in particular, has been understudied, and information in the literature about FE mania is sparse. For many reasons, it is important that a preventive approach should be extended to the full range of FE psychosis.²²

This study was conducted to find the average duration of prodrome in childhood and adolescent mania, to ascertain the symptoms, and to assess the difference in duration of prodromes on the basis of sex, mood, and age, so that preventive methods may be used for future episodes.

Patients and Methods

This study was conducted at the Central Institute of Psychiatry, Ranchi, India. The Central Institute of Psychiatry is a postgraduate teaching hospital with a wide catchment area from eastern India and neighbouring countries such as Nepal, Bhutan, and Bangladesh, and has a 15-bed child psychiatry unit.

This prospective study enrolled 30 consecutive patients over a period of 7 months. The patients were aged 19 years or younger and fulfilled the Diagnostic Criteria for Research International Classification of Diseases-10 (DCR, ICD-10) for manic episode or bipolar affective disorder, manic type. Informed consent to participate in the study was obtained from the nearest relative.

Exclusion criteria included duration of prodrome greater than 6 months (as subjective recall is doubtful beyond that period), failure to obtain informed consent, accompanying relative not remaining with the patient for the index episode and diagnosis of organic mania or substance-induced mania. The patient was required to have been drug-free for at least 6 months before the appearance of the first symptom and there should have been no history of treatment with psychotropic drugs for the index episode.

All patients enrolled in the study were interviewed within 48 hours of their first contact in the Outpatients Department and the severity of the index episode was rated using Young's Mania Rating Scale.²³ Relevant information such as demographic and socioeconomic details, history and family history of mental illness, and personal history was recorded. The symptom checklist was given to the relative, who was asked to record the symptoms. Later, relatives were asked to sequence the events in order of onset and date the individual symptoms as accurately as possible in the symptom checklist. This was a self-generated checklist (available from the first author) that was prepared in consultation with faculty members and other senior practicing psychiatrists. The checklist incorporated the features of the symptom checklist of the Diagnostic and Statistical Manual of Mental Disorders-III-R (DSM-III-R), the description of manic episode in the DSM-IV, and symptoms of manic episode in the DCR, ICD-10. This checklist was used by another group from the Central Institute of Psychiatry to study the pattern of evolution of symptoms during manic episodes.²⁴ The section 'other' in the list was left for uncommon/unlisted symptoms, thereby making the questionnaire flexible and open.

The duration between the first symptom and the day on which criteria for manic episode (bipolar affective disorder, current episode mania) were fulfilled was taken as the prodrome, which included symptoms other than those required for diagnostic criteria (e.g., hedonic symptoms such as increased or decreased appetite, increased energy, and depressive symptoms such as fatigability, suicidal ideas, and low mood). It was hypothesised that a significant prodromal period would emerge from this study in adolescent mania with some symptoms common to prodrome in all patients.

Results

The details of the sociodemographic characteristics are shown in Table 1. The relative was the father for 22 patients, brother for 4, and mother for 4. The mean duration of prodrome was 14.9 ± 18.3 days (range, 3.0 - 65.0 days). Twenty two patients (73.3%) had a prodrome with a mean of 20.3 ± 18.6 days. Twenty one patients did not have any history of psychiatric illness, while 9 patients had previous affective episodes (mean, 1.7 episodes; range, 1 - 5 episodes; median, 1 episode). Eighteen of the 21 FE patients (85.7%) had a prodrome with a mean of 22.80 days and 4 of the 9 patients with a previous history of affective episode (49.4%) had a prodrome with a mean of 29.75 days. The mean and standard deviations of the prodrome for the various subcategories are shown in Table 2. A significantly longer prodromal period was found for the age group 12 to 16 years than for the age group 17 to 19 years (mean, 22.9 days vs 7.9 days).

A significant difference by sex was found in Chi-squared analyses (likelihood ratio = 0.02). All 7 females (100%) had predominantly irritable mood, whereas 15 of 23 males (65%) had irritable mood. Table 3 shows the most commonly occurring symptoms in order of appearance in the prodrome (according to the symptom check list).

The most frequent first symptom occurring in prodrome was decreased sleep (27%), followed by vocal claims (23%). Of the first 3 frequent symptoms, decreased sleep was the most frequent (45%), followed by vocal claims (41%) and

Table 1. Sociodemographic features of the study group.

Characteristic	Number of patients (%) [n = 30]
Sex	
Male	23 (77)
Female	7 (23)
Religion	
Hindu	24 (80)
Muslim	5 (17)
Christian	1 (3)
Age (years)	
12-16	14 (47)
17-19	16 (53)

increased self-esteem (32%). Of the first 5 symptoms, vocal claims and increased self-esteem were equally frequent (54%), followed by decreased sleep (50%) and loud singing/dancing (36%).

Discussion

The target of this study was the duration and pattern of prodromal symptoms in childhood and adolescent mania. Acute or abrupt onset have been described but the exact duration has remained elusive until, in 1 study, a time frame of 1 to 10 days was noted.²⁵ A more precise duration of 21.14 \pm 22.24 days was given in another study.⁶ However, in other studies, it was concluded that prodromal symptoms might precede the full syndrome by weeks or months (median, 22.00 days).^{7,15}

This study showed that 73% of the population reported prodromal symptoms, which is similar to 75% reported by Smith and TARRIER,⁷ but less than 93% reported by Keitner et al.⁸ The findings of this study are in contrast to the findings

Table 2. Prodrome differences for patient subgroups.

Characteristic	Mean prodromal period \pm standard deviation (days)	Significance
All patients (n = 30)	14.9 \pm 18.3	
Age (years)		p = 0.021
12-16 (n = 14)	22.9 \pm 21.0	
17-19 (n = 16)	7.9 \pm 12.3	
Sex		NS
Male (n = 23)	12.7 \pm 16.0	
Female (n = 7)	22.0 \pm 24.2	
History		NS
Absent (n = 21)	17.9 \pm 19.1	
Present (n = 9)	7.9 \pm 16.8	
Predominant mood		NS
Elevated (n = 8)	21.4 \pm 21.6	
Irritable (n = 22)	12.5 \pm 16.8	
Young's Mania Rating Scale		NS
26-36 (n = 19)	17.4 \pm 20.4	
37-46 (n = 11)	10.5 \pm 13.7	

Abbreviation: NS = not significant.

Table 3. Frequency of the most commonly occurring symptoms in order of appearance in the prodrome.

Symptom	First symptom Number of patients	Second symptom Number of patients	Third symptom Number of patients	Fourth symptom Number of patients	Fifth symptom Number of patients
Decreased sleep	6	3	1	1	0
Vocal claims	5	2	2	2	1
Increased self-esteem	2	2	3	4	1
Loud singing/dancing	0	0	2	3	3
Increased/decreased appetite	1	3	1	1	0
Restlessness	0	1	1	1	4
Increased talking	1	2	0	1	1

of previous studies,²⁰⁻²¹ which inferred that the onset of juvenile mania might be insidious, manifesting itself in some children at the beginning of life. One of the major differences could be that in the group described here, all patients were aged between 12 and 19 years, whereas earlier studies enrolled younger patients. In this study, prodrome was significantly longer (mean, 22.9 days) in the younger age group than in the older age group (mean, 7.9 days). As 12 of the 14 children in the younger age group had FE mania, the prodromal period in 85.7% of this group gave the clinicians an opportunity to educate the relatives about common prodromal symptoms so that early intervention for future manic prodrome could be instigated.

Another reason for the shorter duration of prodrome in this study may be the use of the stringent DCR, ICD-10 criteria to demarcate prodrome from onset of the manic episode, which were not used in any of the previous studies, whereby the demarcating feature was either admission to hospital or left to the patient's or relative's discretion). As shown in earlier studies,²⁶ a significant proportion of patients (73%) had predominantly irritable mood and only 8 of 30 patients (27%) had elevated mood. A significantly high prevalence of irritable mania in females (7 of 7) compared with males (15 of 23) was also noted.

Jacobson, while describing the signs, stressed the fact that each individual may have different symptoms thus emphasising the heterogeneity of symptoms in a prodromal phase.⁹ However, other studies found certain symptoms that were consistent in all patients.^{6,7,9,27,28} These symptoms included decreased sleep, increased activity, increased socialisation, and elevated mood. In 1987, Wehr et al hypothesised that sleep disturbance was the final common pathway leading to a manic episode.²⁹

In this study, decreased sleep, vocal claims, and increased self-esteem were frequently found among the first 5 symptoms. An interesting clinical feature of many patients with mania in this study was the ease with which they complied with the request to sing a song. Singing was thus assessed as a prodromal symptom and was found in 36% of the population when the most common first 5 symptoms were considered together. Interestingly, elevated/irritable mood never predominated the prodrome, although the acumen needed by the relatives to detect this might be questionable in this sociocultural group.

This clinical study of prodromal symptoms in childhood and adolescent mania was exploratory in nature and was thought necessary owing to the absence of any comprehensive published work from India and limited international research. Seventy three percent of the study population (22 of 30 patients) were found to have a mean prodromal phase of 20.3 days. Decreased sleep, vocal claims, increased self-esteem, and loudly singing songs/dancing were the most common initial prodromal symptoms, which contrasts with the elated mood and increased activity reported in previous studies of adult populations. The difference could be either due to the difference in age of the patients or to cultural differences. This study had the advantage of assessing the

prodromal phase in detail via a symptom checklist with specific relevance to an Indian setting.

Some limitations of this study include the small sample size, the non-standardised symptom checklist, which was more closed than open, the lack of a control group for drug treatment or any other form of treatment, and the lack of patients younger than 12 years. Again, unless prodromes are similar in duration and pattern across episodes, it would be difficult for the family or treating personnel to draw conclusions, hence the need to compare the initial date with that of follow-up and readmissions, thus requiring a prospective detection of manic prodromes rather than the approach used in this study.

The strength and uniqueness of this study lies in the fact that prodrome was demarcated when DCR, ICD-10 criteria for manic episode were fulfilled, thus making it more objective and definitive rather than arbitrary and subject to patients' or relatives' discretion. With these findings, patients and their relatives can be sensitised to the early warning symptoms so that treatment can be initiated early to prevent a full-blown manic episode and/or admission to hospital, thereby influencing the course and prognosis of the manic episode.

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