The Stages of Mania

A Longitudinal Analysis of the Manic Episode

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The progression of symptoms during an acute manic episode was studied retrospectively in 20 bipolar manic-depressive patients whose diagnosis was reconfirmed at follow-up. Three stages were delineated, the most severe of which was manifested by bizarre behavior, hallucinations, paranoia, and extreme dysphoria. Despite symptoms that might have otherwise prompted a diagnosis of schizophrenia, patients appeared clearly manic both earlier in the course and later as the episode was resolving.

The level of functioning was ascertained at follow-up and compared statistically with the level of psychotic disorganization during the acute manic episode; no relationship was found. The advantages of using a longitudinal view of a psychotic episode as a diagnostic tool is discussed.

In the course of longitudinal studies of manic-depressive illness during the past seven years we have frequently observed periods during the patient's manic episode when his symptoms appeared to be indistinguishable from those of acute schizophrenia. Because of the recent availability of lithium carbonate for the acute and prophylactic treatment of mania,[1,2] the task of recognizing this illness and differentiating it from schizophrenia has assumed renewed importance.

We have attempted to investigate systematically the course of the manic episode in 20 patients who by strict diagnostic criteria were considered on admission to have manic-depressive illness, who had a complete manic episode at some time during hospitalization, and in whom the diagnosis of manic-depressive illness was confirmed on follow-up. The date reviewed suggest that the occurrence of "schizophrenic-like" symptoms during the manic episode in some patients does not differentiate them diagnostically or prognostically from manic patients without such symptoms.

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Methods

Prior to admission to either of two metabolic research units at the National Institute of Mental Health (NIMH), patients were screened for primary affective disorder by at least one psychiatrist and a psychiatric social worker. Patients were referred by private psychiatrists or mental health clinics, generally from the Washington, DC, area. The referral sources were aware of our group's interest in affective illness and of the free inpatient treatment available at NIMH. More specifically, referrals were stimulated by the availability of lithium carbonate through our program.

Twenty consecutively admitted patients were selected for this study on the basis of having participated in an ongoing follow-up reexamination of manic-depressive patients and having had at least one complete manic episode during hospitalization. A complete manic episode is one in which patients proceed from a depressed or normal mood state, thru mania, and returning to a depressed or normal state while hospitalized, so that the entire course was observed. The manic episodes under study averaged four weeks in duration. The total length of hospitalization (averaging four months) was longer than is usual for affective illness—a consequence of the fact that the research protocols involved long periods off medication. In addition, some patients were kept in the hospital through more than one manic or depressive episode.

The diagnosis of bipolar affective disorder was based on a history of relatively good premorbid adjustment, a history of previous episodes of mania and depression, no history of personality deterioration, and symptoms compatible with the diagnosis of mania or depression at the time of admission.[3] Though not required for the diagnosis, patients frequently had a family history of affective disorder. Special care was taken to exclude patients whose histories were suggestive of schizophrenia, particularly patients with any of Schneider's first-rank symptoms of schizophrenia (experiences of alienation, thought insertion, thought withdrawal, thought broadcasting, persistent feelings of influence, complete auditory hallucinations, and delusional perceptions).[4]

Hospital Study.—The manic episode was first identified by using

Table 1.—Excerpts From Daily Nursing Notes, Including Patient Verbalizations

Stage I	Stage II	Stage III
"Now I feel like talking" and does so, increasing intrusiveness and irritability, flight of ideas, restless; "I'm not feeling so depressed."	Hypersexual, bizarre (wearing 3 dresses at a time), screaming, angry, delusion; in control but frightened that other patients are against her; grandiose, incessant talking.	Very frightened, talking and crying constantly, pacing. "I'll never get out." "I have cat eyes. He crawls around inside me and he can't stand the light." Profane, hypersexual, uncooperative. "Oh please let me die. I can't take it anymore." "National Institute of Hell."
"I'm going higher than a Georgia Pine. I'm going to fly tonight. I could kill you."	Pacing, manipulative, religious; says he can't trust people; crude, hypersexual, assaultive; wants to be King Kong; grimaced and postured as if anguished; felt "life on the unit is designed to test my tolerance."	Much pacing, grimacing, and bodily shaking; slaps self on arms; afraid of dying. "They're going to cut out my heart." Afraid of being given TNT; thought there was special meaning when his doctor pointed a finger at him; running up and down hall making animalistic noises.
Hyperactive, pressure of speech, sarcastic, playful; "I'm having a ball." Talks of spending $3,000,000.	Took bath in nightgown, yelling, crying, laughing, throwing food, threatening, combative.	Throwing things, exposing herself, trying to escape, parading around in flimsy pajamas crying, "even God has given up" and later, "I'm dying. The radioactivity has made my hair straight." Voided on the seclusion room floor.
"I'm excited but I don't think I'm worried about anything." Later, "You'd rather have me on top of the table than under it wouldn't you?"	Talking about big plans for Christmas party; very loud, profane, almost assaultive, slightly paranoid, very inappropriate telephone use (calling people to solicit money.)	
Somewhat labile, good frame of mind, very busy.	Hypersexual, hyperverbal, hyperactive, suspicious; very angry, assaultive, obscene; banging urinal on door; wanting to use phone to buy stocks.	

global mania ratings for each patient; these global ratings were obtained twice daily by consensus of the nursing research team. This method of evaluation, originally designed to measure depression,[5] has been revised to include a global mania item.[6] The episode was analyzed if the mania rating averaged at least 4 over three consecutive days (equivalent to a moderate degree of mania, ie, hypomania).

Additional corroboration of the manic nature of the episode was obtained from the psychiatrists' and nurses' written descriptions of the patient's affect, psychomotor activity, and cognitive state. Using these daily written observations, we recorded the sequence of symptoms from the beginning to the end of the episode, specifically following longitudinal changes in affect, behavior, and cognition. Both the nurses who originally recorded the observations and we who reviewed the clinical data were blind to all research or therapeutic medications given to these patients.

Follow-Up Study.—Follow-up data described in detail elsewhere (Carlson GA et al, unpublished data) were obtained independently through two-hour systematic interviews with the patient and most significant family member available (spouse, sibling, or parent) without prior knowledge of the patient's course during hospitalization. A 200-item questionnaire was used which focused on job status, changes in family and social relationships, mental status, further hospitalization, and the status of psychiatric treatment. The degree of return to premorbid level of function was assessed by scoring each patient's job status, social function, and interpersonal relationships at the time of interview as compared to those parameters before the first episode of manic-depressive illness. The scoring method was the following:

Areas of Functioning Rated at Follow-Up

Job Status
- 4—Return to the same or better job with same responsibilities
- 3—Return to full-time work but in position of lesser status
- 2—Employed irregularly or works around the home
- 1—Sustained unemployment

Interpersonal and Family Relationships
- 4—Patient and family satisfied
- 3—Family less satisfied but tolerant
- 2—Family dissatisfied but together
- 1—Family disruption due to illness

Social Function
- 4—Normal social function
- 3—Some social withdrawal
- 2—Moderate social withdrawal
- 1—Complete social withdrawal

Mental Status
- 4—Completely normal
- 3—Very mild affective symptoms
- 2—Obvious affective symptoms
- 1—Symptoms requiring constant care

These points were totaled and the patients were ranked from best to worst functioning. These rankings and the rankings of the severity of the acute manic episode (as measured by the extent of progression towards psychotic disorganization) were compared using Spearman's rank order correlation technique.

Results

Patients had an average age of onset of first episode at 28 years with a mean of 4.4 manic episodes and 2.2 depressive episodes over an average of 12.3 years. These demographic data are summarized below:

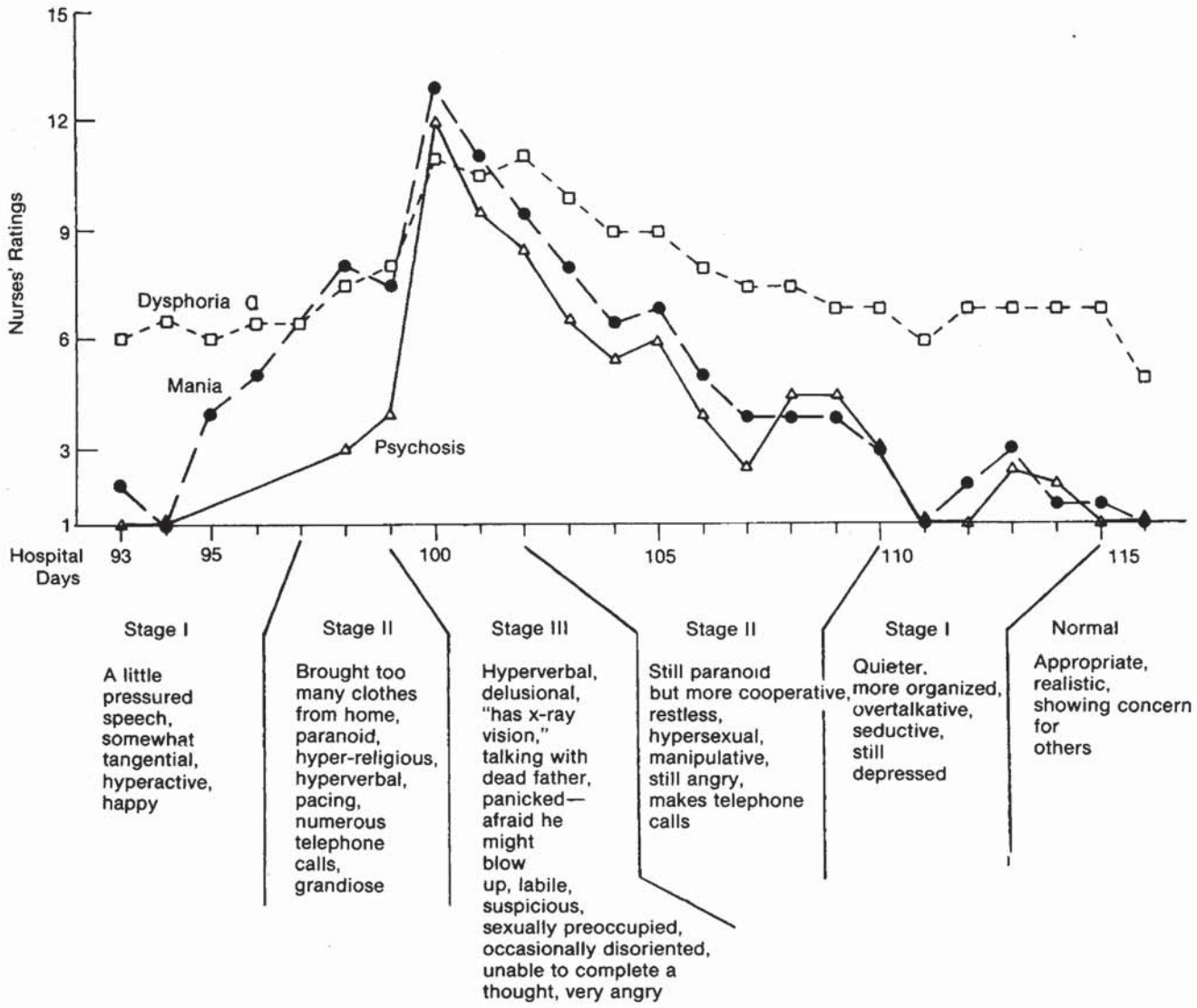

Fig 1.—Relationship between stages of a manic episode and daily behavior ratings (patient 69).

Demographic Data

Sex	Men, 10	Women, 10
Age of onset	Average 28 (range 17 to 57)	
No. of episodes	Average 6.6 (range 1 to 20)	
	1 to 3 episodes	8 patients
	4 to 6 episodes	4 patients
	7 episodes or more	8 patients (including 2 patients with frequent, severe, alternating manic and depressive episodes)
Frequency of episodes		
	Mania—4.4 per patient	
	Depression—2.2 per patient	
Duration of illness		
	Average 12.3 years (range 3 to 31 years)	

Family history of affective disorder (either parent, sibling or both treated for or incapacitated by a depressive episode, manic episode, or both): 15 patients (75%)

Depression immediately prior to index mania: 6 patients (30%)

These demographic data are similar to those derived from other studies of manic-depressive patients,[3] suggesting that our patients are not atypical with respect to relapse frequency, duration of illness, and so forth.

The patient's longitudinal course was divided into three stages based mainly on the predominant mood: in stage 1 euphoria predominated, in stage 2 anger and irritability prevailed, while stage 3 was dominated by severe panic.

In all 20 patients the *initial phase* of the manic episode was characterized by increased psychomotor activity which included increased initiation and rate of speech and increased physical activity. The accompanying mood was labile but euphoria predominated, although irritability became obvious when the patient's many demands were not instantly satisfied.

The cognitive state during the initial stage was characterized by expansiveness, grandiosity, and overconfidence. Thoughts were coherent though sometimes tangential. Also frequently observed during this stage were increased sexuality or sexual preoccupations, increased in-

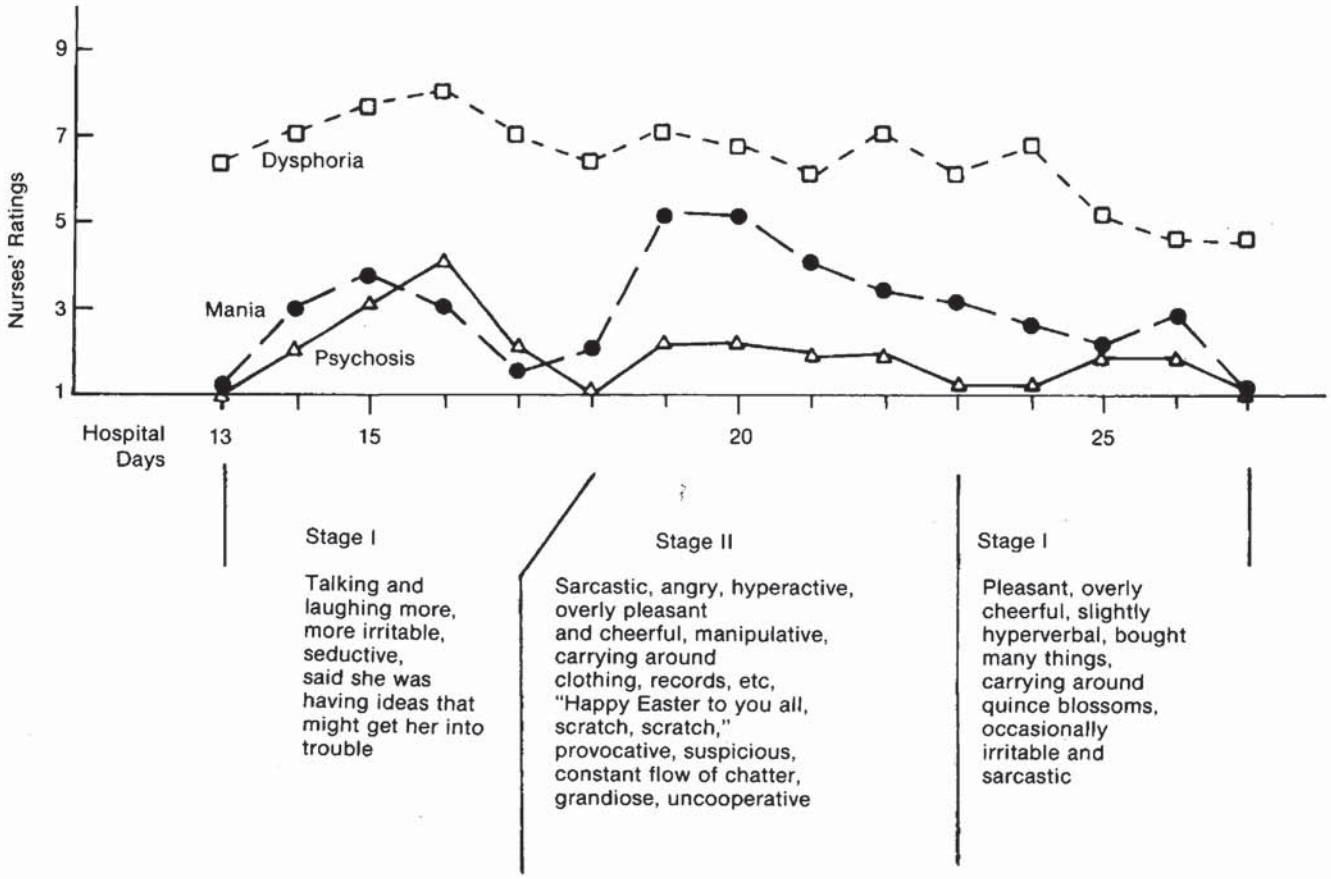

Fig 2.—Relationship between stages of a manic episode and daily behavior ratings (patient 15).

terest in religion, increased and inappropriate spending of money, increased smoking, telephone use, and letter writing. Some of the patients were aware of the mood change on some level and described the feeling of "going high," having racing thoughts, and feeling like they were in an airplane. At this stage patients were not out of control.

The second or *intermediate stage* was also observed in all patients. During this period the pressure of speech and psychomotor activity increased still further. Mood, although euphoric at times, was now more prominently characterized by increasing dysphoria and depression. The irritability observed initially had progressed to open hostility and anger, and the accompanying behavior was frequently explosive and assaultive. Racing thoughts progressed to a definite flight of ideas with increasing disorganization of the cognitive state. Preoccupations that were present earlier became more intense with earlier paranoid and grandiose trends now apparent as frank delusions.

The *final stage* was seen in 14 of 20 patients (70%) and was characterized by a desperate, panic stricken, hopeless state experienced by the patient as clearly dysphoric, accompanied by frenzied and frequently even more bizarre psychomotor activity. Thought processes that earlier had been only difficult to follow now became incoherent and a definite loosening of associations was often described. Delusions were bizarre and idiosyncratic; hallucinations were present in six patients; disorientation to time and place was observed in six patients during this stage; and three patients also had ideas of reference. The diagnosis of schizophrenia, at least as described by Bleuler,[7] was most often entertained at this state. (Schizophrenia, according to Bleuler, was "characterized by a specific type of thinking, feelings and relation to the external world," and included many nonspecific symptoms and a variable prognosis. We, however, are using the narrower concept of K. Schneider,[4] and none of his first-rank symptoms were observed in these patients at any time during their hospitalization.) Quotes from patients in each of the three stages appear in Table 1.

The clinical material on which the staging was based is illustrated in Fig 1 to 3 which present individual patient data showing the progressive changes in the nurses' ratings of mania, psychosis, and dysphoria (an average of the ratings for depression and anxiety) along with clinical vignettes and quotes. This material emphasizes the following points: (1) the mania ratings rise first, followed closely by the psychosis ratings; (2) the dysphoria rating is always fairly high, but as mania and psychosis increase so does dysphoria; (3) stage III, the most intense stage, is represented on the graph as a concatenation of the peaks of mania, psychosis, and dysphoria not observed in stage II patients.

While the sequence of symptom progression was remarkably consistent, the rate of acceleration was variable. Some patients progressed to stage III in hours, others

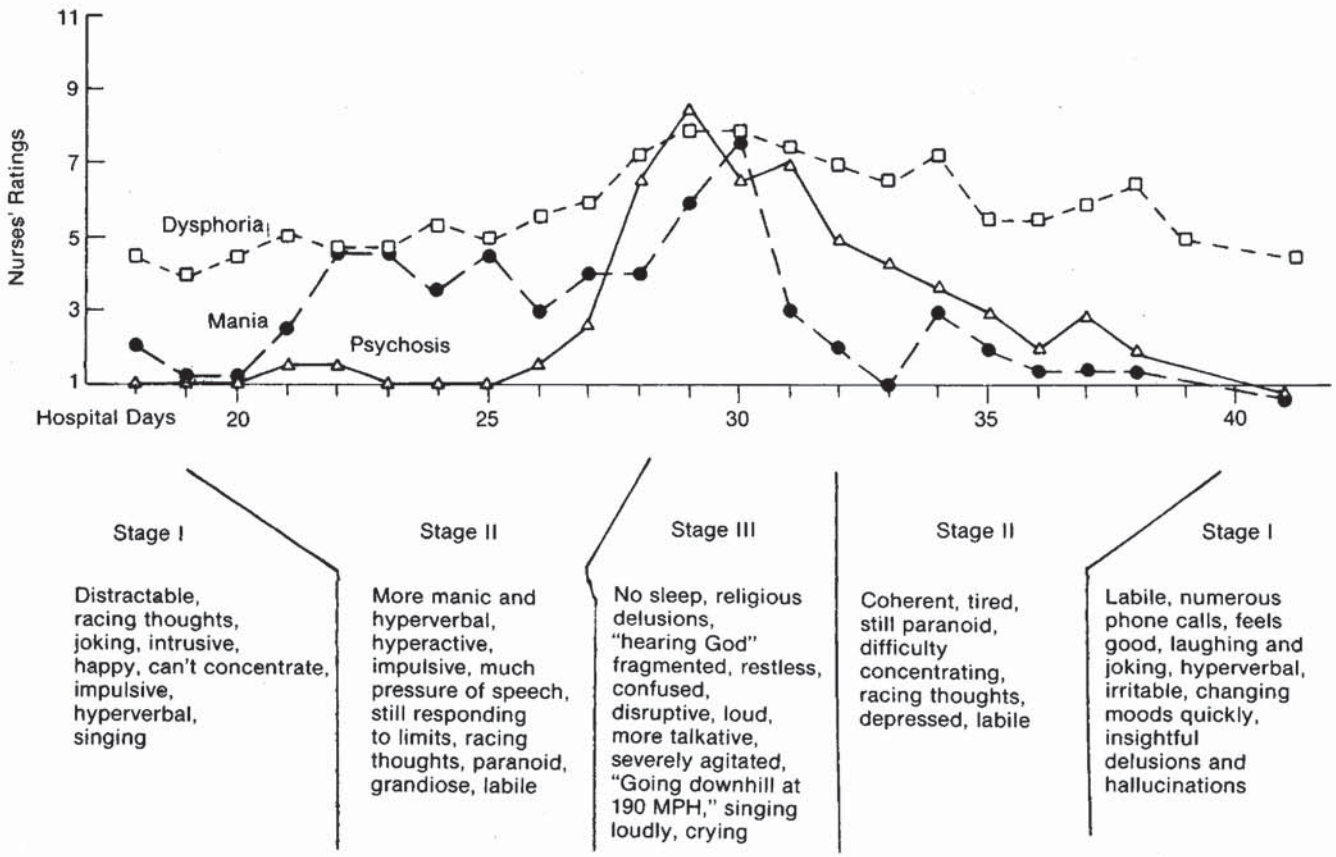

Fig 3.—Relationship between stages of a manic episode and daily behavior ratings (patient 72).

took several days. All of the stage III patients, even the six most psychotic, passed through earlier stages where their symptoms were typically manic. In their deceleration phase they again passed through stages in which they appeared more typically manic. Delusions and hallucinations disappeared as mood returned to normal. Although treatment with antimanic agents hastened the return to a normal mood state, the disappearance of symptoms followed the same course in both spontaneously remitting and treated patients.

Hyperactivity, extreme verbosity, pressure of speech, grandiosity, manipulativeness, and irritability, ie, the manic symptoms most frequently reported in other studies,[3,8] were found in all patients. Table 2 shows the prevalance of symptoms. Examples of some of the delusions, ideas of reference, and bizarre behaviors are illustrated in the patients' quotes in Table 1. Examples of the hallucinations were "hearing the theme from Rawhide," "hearing the hallelujah chorus from the Messiah," "seeing a box open with beautiful flowers emerge," "seeing a kaleidoscope of colors running together," and "talking to my dead daughter."

No significant relationship between the severity of the acute manic episode and the level of function to which the patients returned during the follow-up period were shown by Spearman's rank order correlations technique.

Follow-up data per se are discussed in detail elsewhere. However no patient at the time of discharge or follow-up showed signs of persistent delusions or hallucinations. All patients showed insight, recognizing themselves as having been ill and requiring help for their illness. Four patients who showed an abnormal mental status at the time of follow-up had a mental status compatible with affective disorder, not schizophrenia. Those patients who exhibited symptoms of stage III mania had no greater frequency of relapse or abnormal mental status at the time of follow-up than did stage II manic patients.

Comment

We have presented longitudinal clinical data on the sequence of symptoms occurring during the manic episodes of 20 patients admitted with the diagnosis of manic-depressive illness based on the criteria of Winokur et al.[3] None of Schneider's[4] first-rank symptoms of schizophrenia was revealed by history or observed on admission. Six of the patients, however, at the peak of their manic episodes became grossly psychotic with disorganized thoughts, extremely labile affect, delusions, hallucinations, and brief ideas of reference. Because of these symptoms the diagnosis of schizophrenia was sometimes entertained.

Reference to schizophrenia-like psychotic symptoms occurring during manic episodes can be found in some of the older literature.[9-11] The current view as reflected in recent textbooks of psychiatry is that mania is a syndrome in which euphoria predominates and behavior and preoccupations are really secondary to the prevailing mood. For example, Arieti,[12] Noyes and Kolb,[13] and Freedman and Kaplan[14] have briefly paraphrased Kraepelin's de-

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