

Prevalence and Description of Psychotic Features in Bipolar Mania

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Psychotic symptoms are common in both the manic and depressive phases of bipolar disorder. More than half of patients with bipolar disorder will experience psychotic symptoms in their lifetime. Grandiose delusions are the most common type of psychotic symptom, but any kind of psychotic symptom, including thought disorder, hallucinations, mood-incongruent psychotic symptoms, and catatonia can present as part of a manic episode. Psychotic symptoms suggest poor prognosis when they occur in the absence of affective symptoms. However, psychotic symptoms can mask affective symptoms and make the distinction between manic-depressive illness and other psychiatric disorders difficult, especially in minorities. Careful assessment of prior psychiatric history, family history, and treatment response can aid in the differentiation of affective disorders with psychotic features from psychotic disorders.

Introduction

In 1896, Emil Kraepelin [1] proposed dividing psychotic illness into two groups, dementia praecox and manic-depressive illness. However, the differentiation between the two is often difficult, and psychotic mania has been and continues to be frequently misdiagnosed as schizophrenia or other psychotic illnesses [2,3].

Indeed, psychotic symptoms are common features of both the manic and depressive phases of bipolar disorder. In a review of 26 studies of psychotic symptoms in mania, Goodwin and Jamison [4] concluded that approximately 58% of patients with bipolar disorder had a lifetime history of at least one psychotic symptom, usually when manic. On average, 48% of patients display at least one delusion, 15% one hallucination, and 19% display formal thought disorder [4]. In a recent survey of symptoms by self-report, up to 90% of patients indicated that they

experienced at least one psychotic symptom in their lifetime (Keck PE: Stanley Foundation Bipolar Network, 1998; Unpublished data). All types of psychotic symptoms can occur in mania [4]. However, certain types of symptoms, such as grandiose delusions (and persecutory ideas related to grandiosity), have been considered more characteristic of mania, whereas first-rank Schneiderian symptoms have been associated with schizophrenia. In the 3rd edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III) [5], bizarre psychotic symptoms were part of the diagnostic criteria for schizophrenia. It is currently recognized that mood-incongruent or bizarre delusions, persistent auditory hallucinations, formal thought disorder, and catatonia can be a manifestation of a psychotic mood disorder [3,4,6]. In this paper, we review the type and prevalence of psychotic symptoms in mania, as well as the risk factors for the development of psychosis during a manic episode and their prognostic significance.

Phenomenology of Psychosis

Formal thought disorder

According to the revised DSM-III (DSM-III-R) [7], formal thought disorder is “a disturbance in the form of thought as distinguished from the content of thought,” and examples include loosening of associations, incoherence, poverty of content of speech, neologisms, perseveration, blocking, echolalia, and clanging [7]. The DSM-IV suggests that there is difficulty inherent in developing an objective definition of “thought disorder” [6], however, other examples of thought disorder include pressure of speech, distractible speech, tangentiality, derailment, illogical thoughts, and circumstantiality [8]. Thought disorder is common in mania, presenting with an average prevalence of 19% (range, 9%–84%) [4]. Racing thoughts, flight of ideas, and distractibility can be present in up to 71% of patients with mania [4]. More than 10 studies found that the rate of thought disorder in mania is comparable to the rate in schizophrenia [3]. Thought disorder has been differentiated in “positive” (eg, pressure of speech, racing thoughts, derailment, loss of goal, tangentiality, distractibility, and overinclusive thinking), and “negative” types (eg, poverty of speech, poverty of content of speech, neologisms, private use of words, disorganized speech, and underinclusive thinking) [4,8]. Andreasen [8,9], in a study of thought disorder in 32 manic patients, reported that

72% displayed pressured speech, 56% derailment, 44% loss of goal, and 34% tangentiality, perseveration, and distractible speech. Negative thought disorder, exemplified by illogical thought (25%), poverty of content of speech (19%), and incoherence (16%) was observed less frequently [8,9]. Another study reported that tangential speech, driveling, neologisms, private use of words, and paraphasias were seen in 8% of manic patients and in 45% of schizophrenic patients, whereas nonsequiturs and flight of ideas were seen in 75% of manic subjects and 52% of subjects with schizophrenia [10]. Thought disorder in manic patients seems to be more consistently associated with pressured speech [11] and may have a less consistent presentation in subsequent admissions than in schizophrenic subjects [12]. Overall, it appears that there are some qualitative differences between manic and schizophrenic thought disorder. Manic patients tend to have more combinatory and overinclusive thinking, merging ideas and precepts, whereas schizophrenic thought disorder tends to be more disorganized and less playful, using peculiar words and phrases [4,9,10,13–15]. However, there is considerable overlap and the two cannot be reliably distinguished [16].

Hallucinations and delusions

Hallucinations and delusions are common features of manic episodes. Between 35% and 60% of manic episodes were accompanied by grandiose delusions, 18% to 65% by persecutory delusions, 7% to 48% experienced auditory hallucinations, and 9% to 34% experienced Schneiderian first-rank symptoms [4]. Hallucinations often resemble those of organic psychoses rather than schizophrenia [17]. They tend to be brief, fragmented, and related to religious themes [17,18]; they tend to disappear early during recovery from a manic episode [18,19], are likely to be intermittent, happen when the patient is alone [20], and be more pronounced in severe, delirious states [4,19]. The delusions accompanying mania are often short-lived and changeable, are poorly systematized, and often have grandiose, religious, or paranoid themes, being less fixed than in schizophrenia [4,18]. Overall, delusions occur up to three times more frequently than hallucinations [4].

Mood-incongruent psychosis

Mood-congruent psychotic symptoms include delusions and hallucinations whose content is consistent with manic or depressive themes, such as inflated worth, power, knowledge, identity, or special relationship to a deity or famous person [6]. Mood-incongruent psychotic symptoms include persecutory ideas unrelated to manic themes, such as persecutory delusions not directly related to grandiose ideas or themes, thought insertion, and delusions of being controlled [6]. The DSM-IV considers bizarre delusions as especially characteristic of schizophrenia and defines them as clearly implausible and not understandable, and not derived from ordinary life experiences

[6]. Schneiderian first-rank symptoms (which include hallucinations of one's thoughts being spoken aloud, arguing or running a commentary about the patient, somatic hallucinations attributed to outside forces, and delusions of somatic passivity, thought insertion, withdrawal, or broadcasting) [21] are also considered to be mood-incongruent [6]. In their extensive review of the literature, Goodwin and Jamison [4] conclude that mood-congruent delusions are the most common type of psychotic symptoms in mania. However, mood-incongruent psychosis may be fairly common. A recent study in 49 subjects with psychotic mania reported an almost equal frequency of mood-congruent (24%) and mood-incongruent (20%) psychotic symptoms; mood-congruent and incongruent psychosis coexisted in 55% of the sample [22]. Another study found that mood-incongruent psychotic features were more frequent (56% of subjects) than mood congruent features (44%) [23]. In this study, paranoid ideation (includes both mood-congruent, *ie*, related to grandiose themes, and mood-incongruent) was present in 65% of the sample, first-rank symptoms in 20%, bizarre delusions in 17%, auditory hallucinations in 30% and visual hallucinations in 9% [23].

Delirious mania

This form of mania was described by Bell [24] as characterized by sudden onset, severe insomnia, loss of appetite, disorientation, paranoid ideation and bizarre delusions and hallucinations. Other authors have also emphasized the confusion, agitation, bewilderment, severe psychosis, disturbance in vegetative functions and sudden onset [25,26]. Delirious mania appears akin to stage III mania, in which patient's symptoms appeared indistinguishable from schizophrenia [19], and the dominant affect was one of severe anxiety, frenzied activity, and incoherence. Out of 20 subjects reported by Carlson and Goodwin [19], 14 (70%) developed stage III mania, and six (33%) became disoriented, suggesting that delirious mania may be a fairly frequent occurrence. However, not all patients developed stage III mania acutely, as for some the development of severe, stage III mania took up to several days [19].

Catatonia

Catatonic symptoms described in DSM-IV include motor abnormalities such as immobility, negativism, mutism, echolalia, echopraxia, or excessive motor activity [6]. Catatonic symptoms have often been considered more characteristic of schizophrenia [3]. However, Kahlbaum's [27] description of catatonia included alternating symptoms of mania, melancholy, stupor, and confusion, and DSM-IV recognizes catatonic features as potential presenting features of manic patients [6]. Indeed, a prospective study by Abrams and Taylor [28] suggested that catatonic symptoms are nonspecific for diagnosis and observed more frequently in patients with affective disorders than in patients with psychotic disorders. Up to 28% of acutely

manic patients display at least one catatonic sign [29]. Manic patients with catatonic symptoms do not differ from other manic patients in regards to sociodemographic characteristics, family history of affective disorder or response to somatic treatment [29].

Postpartum psychosis, cycloid psychosis, and periodic catatonia

Classic presentations of bipolar disorders are readily distinguishable from other disorders; however, considerable ambiguity remains about the boundaries between bipolar illness and other conditions [30]. Postpartum psychosis is often considered a form of mood disorder [31]. The postpartum period has typically been a time of heightened vulnerability for recurrence in women with bipolar disorder [32]. Postpartum psychosis is associated with affective illness in up to 57% of cases, with about one third of total cases being diagnosed as bipolar disorder [33]. Patients with postpartum psychosis may experience severe mood-incongruent psychotic symptoms [31], and many of these patients are diagnosed as schizoaffective disorder or schizophrenia [34]. Up to two thirds of patients with puerperal psychosis will have a nonpuerperal relapse [33], and up to 50% will experience a relapse in subsequent pregnancies or after subsequent deliveries, though outcome appears favorable in most cases [35]. Prophylactic treatment with lithium is associated with a decrease in relapse [32,36,37], also suggesting a relationship between postpartum psychosis and bipolar disorder.

Cycloid psychoses are syndromes classified by Leonhard [38] as anxiety-happiness psychosis, excited-inhibited psychosis, and hyperkinetic-akinetic psychosis. They are characterized by delusions (such as paranoid ideation, ideas of reference, hallucinations, and thought disorder), confusion, and psychomotor agitation or retardation that may or may not be accompanied by affective symptoms [38]. Often patients may display anxiety, feelings of ecstasy, and elevated mood-suggestive of affective disorder [38,39]. These syndromes, like manic-depressive illness, are characterized by complete recovery from each phase [38]. Their relationship to affective illness has been the subject of debate for many years. In their study of 30 patients with cycloid psychoses, Brockington *et al.* [40] described their presentation as characterized by confusion, a pleomorphic clinical picture or an acute onset. These patients were diagnosed with either schizoaffective or mood-incongruent affective illness by DSM-III, and they displayed a significantly better outcome than patients diagnosed with schizophrenia [40]. Though some European researchers believe that cycloid psychoses may indeed comprise separate diagnostic entities [41,42] others [43] feel that they are best understood as atypical varieties of affective psychosis. Indeed, lithium carbonate appears effective in the treatment of cycloid psychoses [44,45]. High overlap between cycloid psychoses and postpartum psychosis of up to 54% has also been reported [46,47]. Indeed, the specificity of the diagnosis appears to be low [48].

Periodic catatonia is another recurrent psychotic syndrome that may or may not present with affective symptoms yet has good prognosis (especially in the hyperkinetic, as opposed to the akinetic, forms) [38], and subjects experiencing episodes of periodic catatonia are often free of symptoms in between episodes. They may also display a good response to treatment with lithium [49,50].

Risk Factors for Psychosis in Mania

Increase in severity of manic symptoms appears to increase the likelihood of psychotic symptoms [19,51]. In some [52–55,56•] but not all studies [57,58], earlier age of onset and adolescent presentation have also been associated with a greater likelihood of psychosis when compared with later, adult-onset mania. In the only study in an epidemiologically derived sample, Carlson *et al.* [56•] found that onset between 15 and 20 years of age of mania was associated with paranoid ideation in 100% of the sample and grandiosity in 74%, as compared with 80% and 74% respectively in the adult-onset group. In clinical populations, black patients were more likely to receive a diagnosis of schizophrenia than similar white patients [59]. Racial differences in symptom profiles suggest that black patients may demonstrate more severe psychotic symptoms, especially first-rank symptoms, as compared with whites [60].

Prognostic Implications of Psychosis in Mania

The prognostic significance of psychotic symptoms in mania remains unclear. Many studies reported that the treatment response or outcome of psychotic mania is similar to nonpsychotic mania [53,61–63]. Some researchers found that patients with psychotic mania had longer periods of remission while on lithium treatment than those without psychotic symptoms [64]. Other researchers, however, found that when compared with manic patients without psychotic features, patients with psychotic features experience higher rates of relapse [65], worse social functioning, and occupational status [65,66]. Some studies have suggested that certain psychotic features may be indicators of poor outcome. In a sample of 54 patients recovering from a manic episode with psychotic features, Tohen *et al.* [23] found that mood incongruent psychosis was associated with a 90% relapse rate 4 years after the index episode, compared with only 60% of patients with mood-congruent psychotic symptoms [23]. Mood-incongruent psychotic symptoms have also been associated with higher Brief Psychiatric Rating Scale scores 6 months after the index manic episode, and worse Global Assessment of Functioning scores 2 years after a manic episode [22]. Formal thought disorder during the acute episode has been associated with a shorter time in remission and increased rates of relapse [67]. Schneiderian first-rank psychotic symptoms may be associated with a

poor response to lithium monotherapy [68] and poor residential status [23]. However, other studies suggest that neither mood incongruence, bizarre nature of psychosis, nor formal thought disorder predict outcome in mania [3,4].

Overall, available studies support the DSM-IV contention that the occurrence of psychotic symptoms in the absence of manic symptoms, classified as schizoaffective rather than bipolar disorder, is a better predictor of poorer outcome than is the occurrence of psychosis only in the presence of mania [3,4,69]. Thus the temporal association of manic and psychotic symptoms, rather than the presence or absence of psychosis per se or the type of psychotic symptoms, may be more important in predicting outcome in patients with manic syndromes.

Conclusions

Psychotic symptoms are common in mania. Certain psychotic symptoms can be more common in mania than in other conditions, but all types of psychotic symptoms occur in mania. Thus, psychotic symptoms should be considered nonspecific. Indeed, cyclical syndromes in which psychotic symptoms may appear more prominent than affective symptoms can have a course and treatment response similar to affective disorders. Differentiating mania with psychotic features from other conditions that present with psychotic features can be difficult. Therefore, a careful assessment of cross-sectional presentation, course of illness, family history, and response to treatment should be performed in any patient presenting with psychotic features, to rule out a bipolar disorder. This is crucial for treatment planning and determination of prognosis.

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