

## Symptom changes in episodic and recurrent psychosis

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**Abstract.** Changes in symptoms along the course of episodic and recurrent psychosis have yet to be fully elucidated. We investigated the long-term course, at least 5 years, of 40 patients suffering from episodic and recurrent psychosis. A total of 324 episodes observed in these patients were categorized, on the basis of their principal symptom, into three types; episodes of confusion, episodes with hallucinations and delusions, and those with affective symptoms. We divided the 40 patients into the favorable outcome group and the poor outcome group and compared the characteristics of the two groups. In the favorable outcome group, affective episodes were found to be more frequent in later episodes whereas in the poor outcome group, confusion episodes continued to be the most frequent throughout the course. We discuss diagnostic issues concerning episodic-recurrent psychosis and try to locate it within the domain of schizophrenia. (Keio J Med 52 (2): 107–112, June 2003)

**Key words:** confusion, schizophrenia, mood disorder, schizoaffective disorder, longitudinal studies

### Introduction

A group of psychoses with recurrent acute episodes in which some characteristics of both schizophrenia and affective disorders coexist, have long been known by such names as cycloid psychoses,<sup>1</sup> schizoaffective disorders, and schizophreniform psychoses.<sup>2</sup> They are often associated with good outcome. We have observed, however, that not all cases have a favorable outcome. The functioning level of some patients gradually declines with repeated episodes, even though their initial symptoms are similar to those who follow a favorable course.

The authors have investigated “atypical psychosis” that is characterized by a phasic course with a complete recovery after each episode and a favorable long-term outcome. It is similar to episodic and recurrent psychosis. In 1996 we had reported the clinical pictures of 25 “atypical psychosis” patients.<sup>3</sup> The 25 patients were shown to be divided into two groups; the favorable outcome group and the poor outcome group. The favorable outcome group had characteristics as follows; the first episode consisted of confusion accompanied by mood symptoms, and the later episode consisted of the development of mood disorders. In this study, the number of cases has been increased as a result of extensive study. We have observed the long-term course

of 40 episodic and recurrent psychosis patients. As a result of further study, we have successfully confirmed the characteristics of the favorable outcome group and the poor outcome group.

### Patients and Methods

The subjects were inpatients or outpatients either at Keio University Hospital (Neuropsychiatry) or at the Department of Psychiatry of Jiundo Naika Hospital between 1990 and 1999 who had the following characteristics:

1. Brief psychotic episodes of acute onset occurred at least twice
2. No residual symptoms between the first and the second episodes
3. The course was observed for at least 5 years

Organic mental disorders, alcoholism, drug abuse, or clear recurrent mood disorders, i.e., rapid cycling with seasonal pattern, recurrent depressive disorder were excluded.

Patients of Keio University Hospital rarely have hyperkinetic and strong psychomotor excitement and have long durations of remission, because Keio University Hospital has open wards. Patients of Jiundo

Hospital have hyperkinetic and strong psychomotor excitement and relapse frequently. Both of them are representative hospitals in treating mental disorders. The subjects had no bias as patients of episodic and recurrent psychosis.

A series of 40 patients who fulfilled these criteria was accumulated. The patients experienced a total of 324 episodes. These episodes were classified into one of the following 3 categories, on the basis of the principal symptom.

- 1) Confusion (C): confusion of various degree expressed as perplexity or puzzlement, oneiroid state, or alternations of consciousness
- 2) Hallucinations and delusions (HD): auditory hallucinations, visual hallucinations, delusion of reference, and delusion of persecution
- 3) Affective symptoms (A): manic, hypomanic, and depressive

The length of an episode was defined as the duration from the time between the start and end of inpatient or inpatient-like treatment. Inpatient-like treatment means intensive medical care (treatment with psychotropic drugs and frequent consultation with a psychiatrist) and with interruption of the usual occupation or duties.

The social adjustment of the patients was rated 'in the final remission phase' according to the Global Assessment of Functioning Scale (GAF Scale).<sup>4</sup> Patients with scores higher than 70 were assigned to the favorable outcome group and those with scores of 70 or less were assigned to the poor outcome group. In both groups, the symptoms were investigated with regard to the initial, 2nd, 3rd, 4th, 5th, and 6th and subsequent episodes.

## Results

- 1) The number and proportions of each episode were: C, 112 (34.6%); HD, 31 (9.6%); A, 181 (55.9%).
- 2) There were 25 patients (6 men, 19 women) in the favorable outcome group, and 15 patients (3 men, 12 women) in the poor outcome group.
- 3) The mean number of episodes during the course was  $8.0 \pm 4.9$  in the favorable outcome group and  $8.3 \pm 5.8$  in the poor outcome group (Table 1). The duration of the episodes was 11.1 weeks in the favorable outcome group and 12.6 weeks in the poor outcome group (Table 2). The mean remission phase was 78.4 weeks in the favorable outcome group and 111.4 weeks in the poor outcome group. In the favorable outcome group, there was a tendency for the remission phases from the 3rd episode onward to be shorter and for episodes to recur more often (Table 3).

**Table 1** Sociodemographic and Historical Data of the Two Outcome Groups

	Favorable outcome group (N = 25)	Poor outcome group (N = 15)
Age (yr)	42.1 $\pm$ 13.9	44.0 $\pm$ 16.2
Age at onset (yr)	28.6 $\pm$ 11.1	25.7 $\pm$ 9.5
Sex ratio (M:F)	6:19	3:12
Duration of illness (yr)	13.4 $\pm$ 11.2	18.3 $\pm$ 16.3
Final GAF Score	82.0 $\pm$ 7.6	59.3 $\pm$ 7.5
No. of episodes	8.0 $\pm$ 4.9	8.3 $\pm$ 5.8

GAF = Global Assessment of Functioning Scale.

**Table 2** Mean Duration of Episodes (weeks)

	Favorable outcome group	Poor outcome group	Overall
Confusion	8.2	11.0	9.5
Hallucinations and delusions	23.3	6.8	19.1
Mania	6.2	10.8*	7.9
Depression	13.4	17.9	15.0
Overall	11.1	12.6	11.6

\*:  $p < 0.01$ . t test. Significantly different from poor outcome group.

**Table 3** Changes in the Duration of the Remissions After Each Episode According to the Course (weeks)

Episodes	Initial	2nd	3rd	4th	5th	Overall
Favorable outcome group	142.4	152.1	113.2	39.8	58.1	78.4
Poor outcome group	162.5	139.4	94.4	116.5	117.3	111.4
Overall	150.0	147.3	106.2	67.9	80.3	91.0

- 4) Examination of the nature of the episodes revealed the following: favorable outcome group, C 30.0%; HD 11.5%; A 58.5%; poor outcome group, C 41.9%; HD 6.5%; A 51.6%. Differences between the groups were not significant. A review of the changes in the clinical picture during the course revealed that episodes of confusion gradually decreased in number whilst episodes of affective symptoms increased in the favorable outcome group. In the poor outcome group, although less frequent in the 2nd episode, episodes of confusion were maintained at a constant level throughout the course (Table 4).

**Table 4** Changes in Clinical Picture

Favorable outcome group (No. of episodes %)

Episode	Initial	2nd	3rd	4th	5th	6th onward	Total
Confusion	11 (44.0)	9 (36.0)	8 (34.8)	9 (45.0)	4 (21.1)	19 (21.6)	60 (30.0)
Hallucinations and delusions	4 (16.0)	3 (12.0)	1 (4.3)	2 (10.0)	1 (5.3)	12 (13.6)	23 (11.5)
Affective symptoms	10 (40.0)	13 (52.0)	14 (60.9)	9 (45.0)	14 (73.6)	57 (64.8)	117 (58.5)
Mania	2 (8.0)	2 (8.0)	6 (26.1)	5 (25.0)	7 (36.8)	31 (35.2)	53 (26.5)
Depression	8 (32.0)	11 (44.0)	8 (34.8)	4 (20.0)	7 (36.8)	26 (29.5)	64 (32.0)
Total	25 (100)	25 (100)	23 (100)	20 (100)	19 (100)	88 (100)	200 (100)

Poor outcome group (No. of episodes %)

Episode	Initial	2nd	3rd	4th	5th	6th onward	Total
Confusion	8 (53.3)	3 (20.0)	7 (50.0)	5 (41.7)	5 (45.5)	24 (42.1)	52 (41.9)
Hallucinations and delusions	1 (6.7)	1 (6.7)	1 (7.1)	1 (8.3)	1 (9.1)	3 (5.3)	8 (6.5)
Affective symptoms	6 (40.0)	11 (73.3)	6 (42.9)	6 (50.0)	5 (45.5)	30 (52.6)	64 (51.6)
Mania	2 (13.3)	5 (33.3)	2 (14.3)	3 (25.0)	2 (18.2)	16 (28.1)	30 (24.2)
Depression	4 (26.7)	6 (40.0)	4 (28.6)	3 (25.0)	3 (27.3)	14 (24.6)	34 (27.4)
Total	15 (100)	15 (100)	14 (100)	12 (100)	11 (100)	57 (100)	124 (100)

### Case Presentation

#### *The favorable outcome group: 2 cases*

The first case presented here is from the favorable outcome group. The onset was confusion and, as the episodes recurred, this shifted to the condition of mood disorder.

*Case 1. 42-year-old male:* The patient operated a food produce store with his father. When he was 36 years old, the store was remodeled and reopened. However, the remodeling did not proceed satisfactorily, and there were complaints from neighbors about the noise created by the refurbishment. When the produce had still not arrived 4 days before completion, the patient became irritated. He was unable to sleep, lost his appetite, made exaggerated statements and then, became tearful, sitting down and refusing to move saying, “I bought too many vegetables.” He was in an oneiroid state, exclaiming, “I can see many people and animals on the other side of the river and I spoke to an old man on the other bank. He was smiling and when I crossed the river, as though floating in the air, his body suddenly gave off light. I thought him a god and was struck with amazement.” Later, the patient exhibited grandiose, excitable confusion. After about two months, this remitted.

At 38 years of age and again at 40 years of age, the patient experienced depression with lack of energy. This lasted for three months.

In spring, at 41 years of age, insomnia and irritation were triggered by several factors: the produce store becoming busier, cash flow difficult, and being chided by his father. He experienced a visual hallucination, which he described as follows, “I could see a bright fire, at first it was dark, and then it was bright, and I could see three old people, and when they held hands, the light shone again.” The patient was admitted because of grandiose confusion with hyperkinesia, but he quickly calmed down after about a month.

In winter, at 41 years of age, he was still kept busy, and he became manic over 2 months. He could never feel refreshed, and he felt very restless. He said he did not actually feel that he was moving under his own will.

The onset in this patient was confusion associated with an oneiroid state, and he experienced confusion associated with a recurrence of the oneiroid state after two bouts of depression. Later, he exhibited a manic episode, and his condition shifted to the clinical picture of mood disorder. In the remission phases he continued to manage the produce store, and there was no schizophrenic deficit (GAF90).

*Case 2. A 52-year-old male:* At 27 years of age, the patient started his own company and led a busy life as

its director. When he was 28, his mother, who worked in the business, died. After running during a softball game, he experienced an uncomfortable sensation in the left side of his chest, and he imagined he was, alternately: a human being, a god, an enemy, the friend of all mankind, etc. He had one hallucination which he described as follows: "Through a kind of haze I saw a god and then my dead father playing golf and all in a gold hue, as though I were staring at the sun." At that time, this hallucination was accompanied by an ecstatic feeling. The patient was confused. He recovered after two months.

Later, leading the life of manager of his own company, he married at 42 years old. He had his first manic episode at 47 years of age. He became overly confident, feeling omnipotent. He wanted to go out and meet people, he became a big spender, and spent lavishly. When he hurried to cross at a traffic signal, other signals turned green one after another, and he felt that he was somehow being tested. He experienced repeated episodes of mania and depression and was admitted on six occasions from 47 to 49 years of age.

At 52 years of age, working with his new employees he became progressively depressed, and in March took an overdose of medication in an attempted suicide. In July of the same year he became mildly manic but there were no associated hallucinations or delusions (GAF80).

The initial manifestation in this case was confusion with an associated oneiroid state. Later, he became a manager and subsequently became socially active for the next 14 years. At 47 years of age he became manic and during the next two years experienced frequent bouts of manic-depression. At present, he is in remission, and he is continuing to manage his company.

#### *The poor outcome group: 2 cases*

We now describe two patients from the poor outcome group in which the onset was confusion with recurrence.

*Case 3. A 31-year-old woman:* At 17 years of age, this patient became semi-stuporous followed by the persistence of confusion for 5 months and associated with auditory hallucinations of space aliens, visual hallucinations of the children's cartoon hero "Ultraman", UFOs, tombs, and delusions of persecution. At 19 years of age, the patient experienced confusion with garrulousness and hyperactivity. She developed a variety of symptoms, including disorders of self in the form of alien possession, her body being manipulated by a god, thought broadcasting, visual hallucinations of gold showers, auditory hallucinations of a god's voice saying "Cheer up!", and delusions of protecting earth from a

falling meteorite and that she was protecting the earth. She was grandiose, laughing and weeping. Later, after 2 episodes of mania, and at 24 years of age, the patient experienced confusion for 5 months. When 28 years of age, confusion associated with auditory hallucinations persisted for 3 months. She is currently married with one child. She remains in remission, but lacks tenacity and the ability to concentrate. Work seems to be difficult (GAF65).

The patient's social adjustment abilities were only slightly diminished. Confusion and manic episodes recurred with a variety of fluctuating symptoms. Severe disorders of self were observed. This case was characterized by a particularly long initial episode of 5 months. A variety of symptoms persisted even though the episodes recurred. In many cases in which the outcome is only mildly poor, as in this case, the episodes are long, and confusion associated with disorders of self recurs.

*Case 4. A 75-year-old woman:* When 19 years of age, the patient's desire to marry a particular man was opposed by her parents, and she became confused. She was admitted for one month and recovered completely. By 36 years of age, the patient was taciturn, unable to sleep, and reclusive; she was hospitalized. At 43 years of age, the patient was talking in a rambling manner and claimed that she had been deceived, that bombs had been planted. There was associated suicidal ideation, and she was readmitted for two months. At 46 years of age, there was incoherent thinking and excitement, and the patient complained of persecution and ridicule. At 47 years of age, she was hospitalized for insomnia and mania characterized by hyperexcitability and increased speech. At 49 years of age, she nursed her husband during his final illness. She appeared talkative, excitable, and bewildered in the presence of visitors and was admitted. After admission she became confused. At 51 years of age, the patient was emotionally unstable, displaying flight of ideas, constant change conversational topic. She developed excitable mania and was re-admitted. Her condition quickly changed to confusion associated with visual hallucinations. Confusion was subsequently triggered by quarreling with her siblings and she became involved in a dispute with a neighbor over a property boundary; she was re-admitted. At 56 years of age, she became confused after undergoing an EEG examination. At 61 years of age, she became depressed and had suicidal thoughts. At 63, mania was triggered by a matter concerning her daughter's engagement presents. At 64 years of age, she became confused on her brother's serious illness, and at 66 years of age, she became garrulous, unable to sleep, and confused after being diagnosed with rheumatoid arthritis; she was admitted. At 67 years of age, confu-

sion was triggered by her son-in-law taking a lost child to the police and at 70 years of age she exhibited stupor and delusions of persecution; she was admitted on both occasions (GAF60).

The patient is currently living with her daughter's family. They get along well and interact politely. However, the patient's verbal responses and actions are blunt, and in situations that require practical judgment, she often becomes confused and requires assistance. Her social adjustment is somewhat diminished. The patient experienced repeated bouts of a confusional state. The episodes first started with insomnia, garrulousness, and intrusion into the affairs of others. The patient gradually developed flight of ideas and an excitable manic state. She deteriorated to a state of confused excitement. As illustrated in this case, the social adjustment of patients with recurrent confusion gradually diminishes.

### Discussion

#### *Episodic and recurrent psychosis with favorable outcome*

Two concepts are generally known as "episodic and recurrent psychosis with favorable outcome." The first is characterized by an acute onset and polymorphic clinical picture and thus corresponds to *bouffée délirante*,<sup>5</sup> *zykloide Psychosen*,<sup>1</sup> schizophreniform psychoses,<sup>2</sup> reactive psychoses,<sup>6</sup> acute and transient psychotic disorders,<sup>7</sup> schizophreniform disorder, and brief psychotic disorder.<sup>4</sup> Patients rapidly recover from all these and do not show deficit symptoms typical of schizophrenia. The patients' predisposition, specific personality, and stress factors are foregrounded in each of the concepts, but their symptoms are changeable, and most of them share confusion and clouding of consciousness.

The second is a schizoaffective disorder. This is the schizoaffective psychoses concept elaborated by Kasanin, which is triggered by changes in the environment in young adulthood. That is, the patient develops a brief psychosis in which manic-depression in the early phase transforms into acute hallucinations and delusions, but the patient rapidly recovers with no residual symptoms.<sup>8</sup> Based on Bleuler's cross-sectional view, it is typically diagnosed as schizophrenia, whereas according to Kraepelin's prognosis-oriented concept it is diagnosed as mood disorder. Thus, there is dispute over its nosological position in disease classification.<sup>9</sup> The definitions of "schizoaffective disorder" in the ICD-10 and the DSM-IV-TR stress features of both schizophrenia and mood disorder present in the same episode.

The authors have investigated "atypical psychosis" that concept is similar to episodic and recurrent psy-

chosis. We had reported on 25 patients with "atypical psychosis" and had gained the result that the favorable outcome group of "atypical psychosis" had the first episode consist of confusion accompanied by mood symptoms, and a later development episode of mood disorder.<sup>3</sup>

#### *Clinical picture and course*

Our findings show that affective symptoms (A) and confusion (C) are the most common clinical picture in the initial episode of episodic and recurrent psychosis, whether the outcome is good or poor. Together they account for more than 80% of the initial episodes. It is now clear, therefore, that episodic and recurrent psychosis starts with affective symptoms or confusion and it is difficult to predict whether the outcome will be good or poor on the basis of the clinical picture in the initial episode.

Differences can be seen between the favorable outcome group and the poor outcome group as the episodes recur. Confusion persists in the poor outcome group, whereas affective symptoms replace the confusion in the favorable outcome group. In this research, in the favorable outcome group, we can see the same clinical characteristics as "atypical psychosis". Bergem reported that the diagnosis of the majority of Langfeldt's schizophreniform psychoses usually shifted to affective disorder.<sup>10</sup> According to Fein, the diagnosis of 12 patients who exhibited catatonic syndrome on admission was schizophrenia in 8 patients and bipolar disorder in 1 patient, whereas 2 years later it became bipolar disorder in 8 of the 12.<sup>11</sup> Similarly, in our own favorable outcome group, so long as we diagnosed operationally, as the course extended, i.e., from about the 5th episode onward, the likelihood of mood disorder diagnosis increased.

#### *Nosological considerations*

As the patients' social function gradually diminished in the poor outcome group and their social adjustment deteriorated as episodes recurred, a diagnosis of schizophrenia became possible. However, is there a contradiction in diagnosing the confusion-initial favorable outcome group as having mood disorder? For the reasons set forth below, we do not think it possible to say that the favorable outcome group had a type of mood disorder.

First, there was no uniformity across the clinical picture of individual episodes. To diagnose Case 1 by DSM-IV-TR, the initial episode would be "schizoaffective disorder bipolar type," the second and third would be "major depressive episode, moderate," the fourth would be "brief psychotic disorder," and the fifth would

be “manic episode.” We argue that such polymorphic mental disorders essentially fall outside the scope of mood disorder, which are disorders of affect and volition.

Second, the affective symptoms are not typical. The mania in Case 1 lacked elation of mood and there was an impending anxious-tense feeling including delusional atmosphere of an impending event. Moreover, there was also an element of mild ego disorders – a feeling that the patient’s back was being pushed. Speech and behavior were inconsistent and it was difficult to differentiate it from confusion.

Depression principally consists of a lack of drive rather than a depressed mood and it resembles post-psychotic depression. Antidepressants have little effect but a stable effect can be expected from electroconvulsive therapy and mood stabilizers, such as lithium carbonate or carbamazepine. Kocha regards such characteristics as representing catatonia rather than mood disorder.<sup>12</sup> Moreover, there occur sudden suicide attempts that are thought to be due to ego disorders. These symptoms suggest a close relationship to schizophrenia.

The third reason is the susceptibility to being influenced by the environment. The onset in Case 4 was triggered by a trivial provocation in the patient’s environment. Kranz proposed the concept “depressiver Autismus” and viewed the personal experience of the depressed patients as limited to within themselves, with current events or the environment playing less of a role than in schizophrenia.<sup>13</sup> In episodic and recurrent psychosis, patients experience events that have occurred to others as though they had occurred personally. This is a feature often observed in schizophrenia. This susceptibility to being influenced by the environment reflects the weakness of the self-other boundary in schizophrenia. In other words, it is that described by Schneider as “penetrability (durchlässigkeit)” of the “self-environment boundary” (Ich-Umwelt-Schranke) or “loss of ego contour (Konturverlust des Ichs)”.<sup>14</sup>

The fourth reason is the difficulty in detecting essential differences between the favorable outcome group and the poor outcome group. From the clinical picture and course, it seems unnatural to differentiate between the two by claiming that patients in the favorable outcome group had bipolar disorder and patients in the poor outcome group had schizophrenia.

DSM-IV-TR overextends the scope of mood disorder and invites confusion by including catatonic and mood incongruent psychotic features. As stated above,

we think it reasonable to classify episodic and recurrent psychosis within the scope of schizophrenia, rather than mood disorder. Within the scope of schizophrenia, there are episodic and recurrent psychosis with favorable outcome. When their course is followed long-term, they are found to possess characteristics close to those of mood disorder. Zubin claimed that the distinctive characteristic of schizophrenia is vulnerability,<sup>15</sup> and that this is responsible for the episodic recurrent course. Episodic and recurrent psychosis are likely to be mild schizophrenia which best expresses this characteristic. In the poor outcome group, it seems that severe pathology causes the residual state to build up as the episodes recurred, whereas in the favorable outcome group, mild pathology simplified the clinical picture and allowed only affective symptoms to surface. The favorable outcome group and the poor outcome group express only a quantitative difference of progression of the disease.

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