

## Stability of Psychotic Symptomatology (Delusions, Hallucinations), Affective Syndromes, and Schizophrenic Symptoms (Thought Disorder, Incongruent Affect) over Episodes in Remitting Psychoses

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**Summary.** A study was made on 140 schizophrenics, 40 schizoaffectives, 59 unipolar depressives, and 30 bipolar affective disorder patients in order to determine the quality of psychopathology over multiple episodes. The schizoaffectives were the most likely to have multiple episodes. Among the schizophrenics, there were few episodes that lacked psychotic symptoms, but almost half of the episodes for the schizoaffectives were associated with an absence of psychotic symptoms. Three-quarters of the patients with unipolar depression and bipolar illness showed no psychotic symptoms either congruent or incongruent. There was a striking finding that all diagnoses were associated with a decrease in psychotic symptoms over time. These psychotic symptoms (delusions and hallucinations) became particularly more scarce among the schizoaffectives, unipolars, and bipolars. There was a 50% to 67% decrease of episodes with psychotic symptoms as more episodes occurred. For schizophrenia and schizoaffective disorder the first ten episodes were very similar to each other for affective syndromes, formal thought disorder and/or incongruent affect, and delusions and hallucinations. It was not until much time had passed that the symptom pictures changed.

**Key words:** Schizophrenia – Schizoaffective disorder – Affective disorders – Psychotic symptoms over episodes

### Introduction

Because patients with psychotic depressions (depressions with delusions and/or hallucinations) have a poor response to treatment with tricyclic antidepressants (Avery and Lubrano 1979; Glassman and Roose 1981) one may question whether psychotic and nonpsychotic depressions are separate illnesses. To some extent this concept of separate diagnostic entities rests on the possibility that in a depressive with multiple episodes the presence or the absence of psychotic symptomatology will run true to form. In other words, a psychotic depressive should almost always have psychotic depressions.

Two studies have tested this hypothesis. Charney and Nelson (1981) found a greater occurrence of previous psychotic depressions in patients who had index admissions for psychotic depressions when compared to those who had admissions for nonpsychotic depressions. Thus, a previous psychotic episode occurred in 95% of those who were admitted for a

psychotic depression as opposed to only 8% in those who were admitted for nonpsychotic depressions ( $p < 0.001$ ). Helms and Smith (1983) also explored this and found that psychotic depressives had subsequent psychotic depressions. Thus, of 23 other admissions in a group of patients with an index psychotic depressive episode, 18 of the episodes (78%) were psychotic also.

Systematic evaluations of groups do not do justice to the individual case. As an example, we may evaluate the case of a 54-year-old married man, an unskilled worker. In 1984, Mr. J.C. was admitted severely depressed and agitated with delusions of guilt and sin and feelings that he would be eternally damned. He had bodily delusions and olfactory hallucinations of decay and rotting materials. For a short period of time he changed to megalomania, believing that he was a son of God. He had stereotyped movements of his right arm while he was preaching and he said that the movements were imposed by God. There was a series of rapid changes within minutes from the original depressive syndrome to the one with religious megalomania. In time, those states remitted and the patient was discharged as well. For this episode it would appear that the patient had both depressive and maniclike syndromes. His first episode occurred in 1967 during which time he had a feeling of being hopeless and anxious and manifested psychomotor retardation. He had cancerophobia. At the same time, he thought that others believed he was a homosexual and he felt that his behavior was supervised by others during sexual intercourse. He felt himself negatively influenced by rays. There were no hallucinations. His second period of illness occurred in 1970 during which time he heard voices announcing punishment for his sins and had the delusion that he was influenced and directed by rays and that people were gossiping about him. The hallucinations appeared mood-congruent; the delusions appeared mood-incongruent. Between 1972 and 1981 he had a series of six episodes, all of which were alike in that he was agitated, suicidal, was fixated on bodily ills, had a feeling of guilt for sexual sins, was impotent, and felt that he would be castrated. Thus, there appear to be six episodes in a relatively short period of years that were simple depressive episodes. But in 1982, he had the symptoms described above plus he heard the voice of God and Jesus; he produced neologisms; and he had a stereotyped movement of his right arm. He took to preaching on religious matters. Then, in 1983, he had another episode which was marked by only depressive symptoms. Depending on where in the course of his illness that he might have been seen, he would have qualified for a

diagnosis of unipolar depression, schizoaffective disorder, or a rapidly changing bipolar illness. His family history was positive but not specific. There were no psychoses among first-degree relatives but a cousin on the paternal side and a maternal uncle had questionable paranoid schizophrenias; a paternal grandfather committed suicide.

In spite of the fact that patients often show multiple syndromes it would be useful to evaluate the course of illness in specific diagnoses over multiple episodes and hospitalizations in order to determine whether the clinical picture changes or remains stable.

In the present paper, we will explore the stability of psychotic symptomatology over multiple episodes in patients with schizoaffective disorder, unipolar depression, and bipolar disorder. For purposes of comparison we will also look at patients with multiple episodes and hospitalizations in schizophrenia.

## Methodology

A total of 269 patients (140 schizophrenics, 40 schizoaffectives, 59 unipolar depressives and 30 bipolar depressives) were admitted to the Psychiatric University Hospital Zürich. These patients were diagnosed according to the international classification of diseases (8th revision). They had an extensive clinical interview lasting 1–2 h, and much information was available from previous case records and interviews with relatives. The symptoms of the patients were documented by the AMP system and the syndrome checklist of Wing. Many of the patients had multiple episodes both before the index admission and after the index admission, and the psychopathology was recorded for these admissions. In fact, of the 269 original patients, there was information for multiple admissions on 218 patients. The methodology is given in more detail in other papers dealing with the same group of patients (Angst et al. 1983; Scharfetter et al. 1976).

An episode of illness was defined as a period of illness with a relatively clear onset and usually clear ending, in which there was the presence of psychiatric symptoms and a disturbance in the subject's usual level of functioning. To be identified as a separate event, the episode had to be followed by a full or at least a partial remission of at least 1 month. The exception to the rule could have been affective and schizoaffective disorders which cycle without remission; however, the number or rapid cyclers seen during the inclusion time periods is low.

## Results

There are marked differences in age of onset, age at index admission, number of episodes, and number of hospitalizations among the patients. These are presented in Table 1. The unipolars are clearly the oldest at onset; the schizoaffectives have the most episodes; as expected, bipolars and unipolars differ in age of onset and number of episodes.

It was possible to systematically evaluate large numbers of episodes on the basis of the presence of mood-congruent and incongruent delusions and hallucinations (Table 2). The schizophrenics are likely to have mood-incongruent symptoms and a paucity of mood-congruent symptoms whereas the schizoaffectives, in keeping with the diagnosis, are likely to have a sub-

**Table 1.** Characteristics of 269 patients with schizophrenia, schizoaffective unipolar depressive and bipolar disorders

	Schizophrenic (Sc)	Schizoaffective (SA)	Unipolar (U)	Bipolar (B)
<i>N</i>	140	40 <sup>a</sup>	59	30
Median age of onset	26	25	44	32
Median age at admission	34	45	58	45
Median <i>N</i> of episodes	3	9	3.0	4.5
Median <i>N</i> of hospitalizations	3	7	2	3

<sup>a</sup> Schizoaffective manic = 34; schizoaffective depressed = 6

Significant differences at 05 level or better (Mann-Whitney *U*-Test)

Age at admission	Sc < SA; Sc < U; Sc < B; SA < U; B < U
Age of onset	Sc < U; Sc < B; SA < U; B < U
Number of episodes	Sc < SA; SA > U; SA > B
Hospitalizations	Sc < SA; Sc > U; SA > U; SA > B

**Table 2.** Mood-congruent and incongruent delusions and hallucinations related to schizophrenia, schizoaffective, unipolar depressive and bipolar disorders

	Total episodes	<i>N</i> (% no psychotic symptoms)	<i>N</i> (% congruent symptoms)	<i>N</i> (% incongruent symptoms)
Schizophrenia ( <i>N</i> = 140)	654	122 (17)	43 (7)	489 (76)
Schizoaffective ( <i>N</i> = 40)	389	186 (47)	73 (21)	130 (33)
Unipolar depr. ( <i>N</i> = 59)	230	172 (75)	57 (25)	1 (<1)
Bipolar ( <i>N</i> = 30)	184	146 (79)	33 (18)	5 (3)

**Table 3.** Psychotic symptoms (delusions and hallucinations) during episodes in schizophrenia, schizoaffective, unipolar depressive and bipolar disorders

Episodes	1–8 <i>N</i> episodes (% psychotic)	9–16 <i>N</i> episodes (% psychotic)	17–24 <i>N</i> episodes (% psychotic)
Schizophrenia ( <i>N</i> = 140)	566 (82)	80 (79)	8 (63)
Schizoaffective ( <i>N</i> = 40)	264 (58)	103 (56)	22 (27)
Unipolar ( <i>N</i> = 59)	218 (26)	12 (8) <sup>a</sup>	—
Bipolar ( <i>N</i> = 30)	141 (21)	26 (23)	15 (12)

<sup>a</sup> Only for episodes 9–12 (no unipolar had more than 12 episodes)

stantial portion of both types. Nevertheless, the most common type of schizoaffective episode is that which shows no delusions or hallucinations of any sort (47%). Unipolar and bipolar affective disorder patients generally have episodes with no psychotic symptoms but when psychotic symptoms are present they are almost invariably of the congruent type.

**Table 4.** Symptomatology in first ten episodes of illness

Episode	Schizophrenia ( <i>N</i> = 140)				Schizoaffective disorder ( <i>N</i> = 40)			
	<i>N</i> patients with recorded episodes	% with affective syndrome <sup>a</sup>	% with schizophrenic syndrome <sup>b</sup>	% with psychotic symptoms <sup>c</sup>	<i>N</i> patients with recorded episodes	% with affective syndrome <sup>a</sup>	% with schizophrenic syndrome <sup>b</sup>	% with psychotic symptoms <sup>c</sup>
1st	140	51	86	86	40	85	65	70
2nd	109	51	84	89	40	88	50	60
3rd	81	41	91	83	40	90	58	60
4th	65	40	91	72	29	100	42	79
5th	55	36	89	76	32	97	50	59
6th	47	49	89	81	28	93	54	57
7th	40	48	90	65	26	96	62	65
8th	29	59	89	90	23	91	57	61
9th	25	52	92	76	22	95	41	45
10th	16	25	94	88	19	100	63	52
Range between episodes		25%–59%	84%–94%	72%–90%		85%–100%	41%–65%	45%–79%

<sup>a</sup> Affective syndrome = depressive and/or maniclike syndrome

<sup>b</sup> Schizophrenic syndrome = thought disorder and/or incongruent affect (blunting or inappropriate)

<sup>c</sup> Psychotic symptoms = delusions and/or hallucinations

It was possible to rate the patients on the presence of psychotic symptoms, both congruent and incongruent, over the course of 24 episodes. Some patients have more episodes, but rating was only done up to 24 because by the time that point was passed, there were so few episodes as to make the evaluation impossible. The schizophrenics showed 566 episodes for the 140 subjects (Table 3). There were 80 episodes in the group between 9 and 16; only 8 episodes can be counted between episodes 17 to episode 24. Of course, for all groups there was a decrease in numbers of episodes as one went from 1–8 to 9–16 to 17–24. In the unipolars no patient had more than 12 episodes. For all diagnoses there is a decrease in the presence of psychotic symptomatology over time. This is particularly striking for the schizoaffectives, unipolars and bipolars where the percentage of psychotic illnesses decreases by a half to two-thirds. The reason for this decline in psychotic symptomatology over time cannot be assessed from the current material.

Evaluating the first ten episodes for the schizophrenics and schizoaffectives, Table 4 reveals a remarkable degree of similarity. For the 140 schizophrenics, 109 had at least 2 episodes and 51% of these had an affective syndrome of either a manic or depressed type, 84% had either thought disorder or inappropriate or blunted affect, and 89% had psychotic symptoms (delusions and/or hallucinations). For the schizoaffectives as an example, 32 of the 40 patients had at least 5 episodes and of these 97% had an affective state of either depression or mania, thought disorder and/or incongruent and/or blunted affect in 50% of the cases, and psychotic symptoms in 59% of the cases. From Table 4 one may note that though there are small variations with each number episode, there is a large amount of similarity. Thus, over the first ten episodes for the schizophrenics and schizoaffectives there seems to be no meaningful change in the proportion with affective syndromes, thought disorder and/or affective abnormalities, or the presence of psychotic symptoms. However, when one fol-

lows them for a longer period of time, up to 24 episodes (Table 3), there seems to be a dying out of the proportion with psychotic symptomatology, particularly in schizoaffective disorder and the affective disorders. Of course, 19 of 40 schizoaffectives had a tenth episode versus only 16 of 140 schizophrenics ( $p < 0.01$ ). Again, it is notable that schizoaffective disorder is a very episodic illness.

Based on the presence or absence of psychotic symptoms in the first episode of illness, schizophrenics show the same number of subsequent episodes, median 3–4. The schizoaffectives, of course, had both congruent and incongruent symptoms. If the schizoaffectives had only congruent symptoms in the first episode, there was a median course of 9 episodes; if there were only incongruent symptoms, there were 5 episodes; and if there were both congruent and incongruent symptoms, there were 10. Almost none of the patients with affective disorder had incongruent symptoms. Thus, the comparison was between those patients with bipolar and unipolar illnesses who had no psychotic symptoms the first time versus those who had congruent psychotic symptoms. In both cases the median number of episodes (for the combined unipolar and bipolar groups) was 3. Thus, from the data there is no evidence that the presence of psychotic symptomatology predicts a future course of multiple episodes in any special way in affective disorders.

Because of a controversy over whether psychotic depressives have more episodes than nonpsychotic depressives (Helms and Smith 1983) we evaluated this in our unipolars and bipolars. The data are presented in Table 5. There are no significant differences between the unipolars. If one subtracts the age of onset in the unipolars from the age at time of admission to the study, there is a difference. The median age at index for nonpsychotic patients was 57.5 and the age of onset was 40, a difference of 17.5 years. For the psychotic unipolars, the difference is only 10 years. It appears as if the unipolars that are psychotic have had less time to develop approxi-

**Table 5.** A comparison of psychotic versus nonpsychotic (lifetime history of delusions and/or hallucinations) unipolars and bipolars

	Unipolar		Bipolar	
	Never psychotic	Psychotic	Never psychotic	Psychotic
<i>N</i>	30	29	16	14
Median age at index	57.5	61	42	54.5 <sup>a</sup>
Age onset	40	51	31.5	37.5
<i>N</i> episodes	3	3	4	4.5
<i>N</i> hospitalizations	2	3	2	4 <sup>a</sup>

<sup>a</sup> Significantly different from never psychotic bipolars ( $p < 0.05$ , Mann-Whitney *U*-Test)

No significant difference between never psychotic and psychotic unipolars

mately the same number of episodes. However, if one looks at the *mean* ages at index and *mean* ages at onset, one finds an entirely different thing. The mean age for the psychotics at index was 57.8 and the mean age at onset was 46.9. There is a 10.9 year difference. For the nonpsychotic unipolars the *mean* age at index was 54.7 and the *mean* age at onset was 42.1, a difference of 12.6 years. It would seem unlikely that the small difference between 12.6 and 10.9—1.7 years per person—should make very much difference. Thus, the data do not support the idea that there is any difference in frequency of episodes between unipolar psychotics and nonpsychotics.

On the other hand, there are some significant differences in the bipolars. Not only are the bipolar psychotics older at index admission, but they are more likely to have hospitalizations. In this case, the bipolar psychotics have been ill for a shorter period of time than the bipolar nonpsychotics, so the difference which reaches significance for number of hospitalizations seems meaningful. However, looking at the *mean* ages of index and onset for the nonpsychotic bipolars the numbers are 40.9 and 34.0 years. The difference then is 6.9 years. For the psychotics the *mean* age at index is 52.7 and the *mean* age at onset is 38.1, a difference of 14.6 years. Thus it is entirely possible that the extra observation time per person could account for the increased number of episodes or hospitalizations amongst the psychotic bipolars as compared to the never psychotic bipolars.

## Discussion

Variability in the course of all the illnesses—schizophrenia, schizoaffective, unipolar depressive and bipolar—is considerable as regards the number of episodes. Though the vast majority of the schizophrenics did not recover to a status of being asymptomatic, they were nevertheless subject to having episodes with partial remission. Of all the patients, the schizoaffectives had the most episodes. They were also the patients who were likely to have both schizophrenic type symptoms as well as affective type symptoms. Nevertheless, they were likely to have full remissions more frequently than the schizophrenics. As a matter of fact, that is simply part of the definition. Their age of onset was younger than the bipolars but not significantly so. The number of episodes that they suf-

fered, however, was significantly higher than those suffered by the bipolars even though that latter group was next in line for having the largest number of episodes.

Perhaps the most interesting finding in the paper has to do with the fact that if one looks at all of the episodes suffered by the patients with schizoaffective, unipolar depressive, or bipolar remitting illness, most of these episodes are likely to be characterized by an absence of psychotic symptoms. Thus, for the schizoaffectives 47% of the episodes are characterized by no psychotic symptoms, for the unipolar depressives 75% and for the bipolar 79%. To a large extent, this is accounted for by the fact that as time goes on the patients with the remitting disorders seemed to show less and less in the way of psychotic symptoms. Thus, in the beginning of their illnesses the schizoaffectives had 58% of the episodes associated with psychotic symptoms, but by the time they are into their 17th to 24th episodes, only a quarter of the episodes were characterized by psychotic illnesses. The unipolars in their first eight episodes showed 26% of them associated with psychosis, but by the time they go to episodes 9 to 16 they have gone down to 8%. The bipolars also become half as likely to show psychotic episodes with the course of time.

The decrease in psychotic symptoms over time (Table 3) could be interpreted as indicating that patients who have psychotic symptoms have less episodes and thus rarely get into the 17–24 episode range, or for the unipolars the 9–16 range. However, this interpretation is inconsistent with Table 5, which shows that patients that lack lifetime psychotic symptoms are certainly not likely to show more episodes.

The decrease of psychotic symptoms in schizophrenia is consistent with a study of the same patients by Angst et al. (1981). They calculated the relative frequency of a variety of syndromes both at the first and at the last evaluation. Three syndromes declined considerably and four syndromes increased. The declining syndromes were the schizophrenic thought disorders, hallucinations, and suicidal attempts. Increasing syndromes were the affective symptoms in particular, i.e., manialike and depressive syndromes, and the inhibition/stupor and agitation/drive symptoms.

Even though there is a marked decrease in the presence of psychotic episodes over time, the first episodes for all patients look like fingerprints. Over the first ten episodes, a similar proportion of affective syndromes, schizophrenic-type syndromes and psychotic syndromes seem to appear in schizophrenia and schizoaffective disorder. Of course, the presence of formal thought disorder and incongruent affect is more frequently seen in the schizophrenics, the presence of congruent psychotic symptoms is more frequently seen in the depressives, and a mixture is more frequently seen in the schizoaffectives. This is in a sense consistent with the definitions.

In any event, the data indicate a certain stability of the clinical picture up to a period of time, after which certain symptoms become less prominent, i.e., psychotic symptoms (delusions and/or hallucinations). This occurs in all of the groups but is particularly striking in the schizoaffective, bipolar, and unipolar remitting groups. The biologic meaning of this change is as yet unknown.

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Received August 28, 1984