Sustained Remission of Schizophrenia Among Community-Dwelling Older Outpatients

Lisa A. Auslander, Ph.D.
Dilip V. Jeste, M.D.

Objective: The frequency and nature of sustained remission of schizophrenia are controversial.

Method: The authors assessed the prevalence of sustained remission among 155 middle-aged and elderly outpatients living independently. They compared patients with sustained remission to symptomatic schizophrenia patients and normal comparison subjects using standardized psychopathological, cognitive, and functional measures.

Results: Eight percent of the older schizophrenia patients living independently met criteria for sustained remission. Their level of psychopathology was similar to that in normal subjects and lower than that in symptomatic patients. On cognition, quality of well-being, and everyday functioning, the group with sustained remission was intermediate between the normal and symptomatic groups and differed significantly from the normal subjects.

Conclusions: Sustained remission can occur even in older patients with very chronic illness, but its prevalence is lower than that in several published reports. Remission may reflect a return to premorbid functioning, consistent with neurodevelopmental hypotheses of schizophrenia.

(Am J Psychiatry 2004; 161:1490–1493)

Kraepelin's description of dementia praecox (1) suggested a progressive personality deterioration in schizophrenia. However, reported rates of remission in schizophrenia range from 3% to 64% (2–4). In several instances, the criteria used to define remission were questionable. We did not find any reports that used standardized rating

TABLE 1. Characteristics of Middle-Aged or Elderly Outpatients With Sustained Remission of Schizophrenia and Matched Symptomatic Schizophrenia Outpatients and Normal Comparison Subjects

Variable	Normal Comparison Subjects (NC) (N=12)		Patients in Remission (REM) (N=12)		Symptomatic Patients (SYM) (N=12)[a]		Analysis						Pairwise Comparisons[b]
	Mean	SD	Mean	SD	Mean	SD	F	t	χ^2	U	df	p	
Demographic characteristics													
Age (years)[c]	57	9	59	7	55	6							
Education (years)[c]	14	2	12	3	12	4							
	N	%	N	%	N	%	F	t	χ^2	U	df	p	
Male gender[c]	10	83	10	83	10	83							
Caucasian ethnicity	9	75	9	75	9	75			0		2	1.00	NC=REM=SYM
	Mean	SD	Mean	SD	Mean	SD	F	t	χ^2	U	df	p	
Number of comorbid medical illnesses	1.4	1.1	1.3	1.4	1.7	1.3	0.3				2, 33	0.71	NC=REM=SYM
Psychiatric characteristics													
Age at onset of schizophrenia (years)			30.0	14.8	28.9	11.5		0.3			22	0.79	REM=SYM
Duration of illness (years)			28.0	17.4	29.9	12.1		0.3			22	0.76	REM=SYM
	N	%	N	%	N	%	F	t	χ^2	U	df	p	
Ever hospitalized for psychiatric illness			10	83	12	100				60.0	22	0.51	REM=SYM
Paranoid subtype			7	58	9	75				6.0	22	1.00	REM=SYM
Family history of psychotic disorder			3	25	1	8				60.0	22	0.51	REM=SYM
Family history of mood disorder			3	25	2	17				66.0	22	0.76	REM=SYM
	Mean	SD	Mean	SD	Mean	SD	F	t	χ^2	U	df	p	
Severity of psychiatric symptoms[d]													
Scale for the Assessment of Positive Symptoms, total score	0.8	1.2	1.2	1.5	6.2	1.8	47.1				2, 33	<0.001	NC=REM<SYM
Scale for the Assessment of Negative Symptoms, total score	0.7	1.2	3.0	2.4	8.7	3.2	30.8				2, 33	<0.001	NC=REM<SYM
28-item Hamilton Depression Rating Scale, total score	1.3	1.4	4.0	7.3	15.8	6.7	21.2				2, 33	<0.001	NC=REM<SYM
Global neuropsychological functioning,[e] global T score	51.6	6.2	42.8	7.3	37.7	5.6	11.3				2, 28	<0.001	NC<REM=SYM
Health-related quality of well-being: Quality of Well-Being scale, total score[f]	0.77	0.11	0.60	0.10	0.53	0.06	21.4				2, 30	<0.001	NC<REM=SYM
Functional capacity: Direct Assessment of Functional Status scale, total score[f]	104.3	2.4	97.1	7.5	93.7	5.6	9.5				2, 32	<0.001	NC<REM=SYM

[a] DSM-IV diagnosis of schizophrenia—paranoid, catatonic, disorganized, or undifferentiated subtype.
[b] Post hoc tests of ANOVAs were performed by means of Tukey's honestly significant differences procedure. Post hoc tests of chi-square analyses used Ryan's procedure.
[c] Subjects were matched on this characteristic.
[d] Higher scores indicate greater severity of symptoms.
[e] T scores derived from an expanded Halstead-Reitan Neuropsychological Battery (10). Higher scores indicate better cognitive performance.
[f] Higher scores indicate better functioning.

scales of psychopathology, neurocognition, quality of well-being, and everyday functioning to compare patients in sustained remission with symptomatic patients and with normal subjects.

In this study we sought to examine the frequency and nature of sustained remission among middle-aged and elderly outpatients with schizophrenia. We compared those with sustained remission to demographically matched "symptomatic" schizophrenia patients and normal comparison subjects. We hypothesized that patients in sustained remission would have lower levels of psychopathology and cognitive impairment and higher levels of well-being and everyday functioning than symptomatic patients and would be similar to normal comparison subjects on these measures.

Method

The protocol was approved by the local institutional review board, and all the participants signed a written informed consent for research. Over the past decade our research center (funded by the National Institute of Mental Health) has studied 374 middle-aged and elderly outpatients with schizophrenia. The diagnosis was based on the Structured Clinical Interview for DSM-III-R or DSM-IV (5), administered by psychiatry or psychology fellows, and confirmed at staffing meetings by two board-certified geriatric psychiatrists (including D.V.J.). Forty-two patients were labeled as having "residual" schizophrenia. The remaining 332 patients were included in a "symptomatic or remitted" group, with 155 living independently (either alone or with someone else) and 177 living in assisted care facilities or institutions. We also studied 202 middle-aged and elderly normal comparison subjects. Many of these patients with schizophrenia and normal comparison subjects have contributed data to previously published reports (6).

We defined sustained remission as follows. The patient 1) previously met the DSM-III-R or DSM-IV criteria for schizophrenia, 2) received a clinical course specifier of "in full remission," 3) had been living independently of supervision by caretakers for the past 2 years (7), 4) had not had a psychiatric hospitalization for the last 5 years, 5) presently reported psychosocial functioning within the "normal range," and the report was confirmed by a caregiver, and 6) was presently either not taking antipsychotic medications or taking no more than one-half of the highest daily dose since enrollment in our center. (A number of older patients who had been symptom-free for years were reluctant to stop taking medications on the basis of their earlier experiences.) We excluded patients meeting the DSM-IV criteria for dementia.

Relevant data obtained from each subject were corroborated, whenever feasible, by information from medical records and/or family members. Psychopathology was assessed with the Scale for the Assessment of Positive Symptoms and the Scale for the Assessment of Negative Symptoms (8) and the Hamilton Depression Rating Scale (9). Cognitive performance was evaluated with an expanded Halstead-Reitan Neuropsychological Battery (10), quality of life was assessed with the Quality of Well-Being scale (6), and everyday functioning was determined with the Direct Assessment of Functional Status scale (11). Intraclass correlation coefficients for interrater reliability ranged from 0.81 to 0.89. The raters were masked to other clinical information, including remission status.

All the statistical tests were two-tailed. A Bonferroni correction was used within each of the domains.

Results

Eighteen schizophrenia patients had received a clinical course specifier of "in full remission." A detailed chart review showed that six of them did not meet our criteria for sustained remission. The remaining 12 patients with sustained remission (age range=45–70 years) were all living independently—either alone (N=9) or with someone else (N=3). These patients were followed in our center from 2 to 12 years (mean=6). The diagnosis of schizophrenia and the course specifier of remission were reconfirmed at annual visits.

We compared the 12 patients with sustained remission to all independent-living symptomatic patients (N=143) and normal comparison subjects (N=202) on demographic characteristics. While no demographic differences were found between the group with sustained remission and the symptomatic group, the normal comparison subjects were older, more educated, and more often female than the two patient groups. We conducted subsequent analyses after matching 12 normal comparison subjects and 12 symptomatic patients individually to the 12 patients with sustained remission on age, gender, and level of education. The patients with sustained remission had levels of positive, negative, and depressive symptoms that were similar to those of the normal comparison subjects, but they had less severe psychopathology than the symptomatic patients (Table 1). On measures of cognition, quality of well-being, and everyday functioning, the group with sustained remission was intermediate between the normal comparison subjects and the symptomatic patients but differed significantly only from the normal subjects.

An analysis of covariance of the differences between the patients with sustained remission and the symptomatic patients in psychopathology, using current antipsychotic daily dose as a covariate, did not alter the overall results.

Discussion

Twelve (8%) of the 155 schizophrenia patients living independently met the criteria for sustained remission. The relatively low prevalence of remission in our study group compared to that in some other studies (2, 3) may be a function of our strict criteria for sustained remission or our selection of subjects. It is also conceivable that our rate was an underestimate of sustained remission, as some outpatients who had remissions did not wish to be followed.

The finding that patients with sustained remission displayed cognitive and functional impairments statistically similar to those of symptomatic patients may seem to be at variance with the notion of true remission. Yet this result is consistent with the neurodevelopmental hypothesis of schizophrenia, which holds that cognitive and functional deficits precede the onset of overt psychotic symptoms by years and are independent of positive or other clinical symptoms (12). It is, therefore, not surprising that such impairments could outlast symptom remission.

Our study has several limitations. It was restricted to people at least 45 years old. The results may be different in younger adults; however, the incidence of remission increases in late life (3). The sizes of the matched groups were relatively small—i.e., 12 subjects per group. We included some patients taking low doses of antipsychotics in the group with sustained remission. However, covarying for antipsychotic dose did not change the results.

Our findings indicate that sustained remission occurs even in patients with very chronic illness and offer hope that there can be a "light at the end of the tunnel."

Our results also show that true recovery from schizophrenia is an exception rather than a rule. The low prevalence of remission may indicate difficulties in attempting to compensate for decades of "lost life" during which these patients experienced protracted periods of severe disability (4) along with social stigma, adverse effects of treatments received, and the aging process itself. Furthermore, a lack of adequate psychosocial rehabilitation programs in most communities likely contributes to suboptimal outcomes in many patients (7). It is probable that the likelihood of sustained remission of schizophrenia would increase significantly with better overall treatments including psychosocial rehabilitation.

Presented in part at the 15th annual meeting of the American Association for Geriatric Psychiatry, Orlando, Fla., Feb. 24–27, 2002. Received June 17, 2003; revisions received Oct. 20 and Nov. 21, 2003; accepted Feb. 11, 2004. From the Department of Psychiatry and the Department of Neuroscience, University of California, San Diego; and the Psychiatry Service, Department of Veterans Affairs San Diego Healthcare System. Address reprint requests to Dr. Jeste, Psychiatry Service (116A-1), VA San Diego Healthcare System, 3350 La Jolla Village Dr., San Diego, CA 92161; djeste@ucsd.edu (e-mail).

Supported in part by NIMH grants MH-43695, MH-49671, MH-45131, and T-32 MH-19934 and by the Department of Veterans Affairs.

The authors thank Shah Golshan, Ph.D., for his help with statistical analyses.

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