Remission of Schizophrenia in Indonesia: An outpatient-based 12-month follow-up study

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Abstract

This study assessed the achievement of remission criteria among schizophrenic outpatients in Indonesia and detected the most significant factors involved in this process. A 12-month follow-up was conducted to assess symptomatic remission was conducted at Cipto Mangunkusumo Hospital.

Inclusion criteria were outpatients with an International Classification of Diseases 10th edition diagnosis of schizophrenia and schizoaffective disorder. Symptomatic remission was assessed using the Positive and Negative Syndrome Scale (PANSS) criteria (i.e., low scores for symptom 8-cores of PANSS for ≥6 consecutive months). At 6 months, approximately 137 (61%) of 223 outpatients met the criteria for symptomatic remission, and at the end of 12-month follow-up period, 64 (80%) of 80 outpatients achieved remission. Among these, 16 (20%) patients did not fulfill the remission criteria.

A significant correlation was found between remission and the Global assessment of functioning (GAF) score. Remission was associated with family history of mental illness, onset of illness, type of antipsychotics, and prescription pattern. After 12 months, 80% of our schizophrenic outpatients achieved remission.

Early onset of illness, family history of mental illness, use of first-generation antipsychotics, and poly-pharmacy were associated with poor remission rates. Some of these factors are potentially modifiable and should become targets for clinical care.

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Introduction

The course of schizophrenia is variable, with some schizophrenic patients achieving favorable outcomes. Previously, schizophrenia was considered a chronic disorder exclusively associated with poor outcomes and improvement of symptoms as the common outcome domain. Social and occupational function is unfortunately poor.[1] However, in recent years, symptom remission and recovery have become achievable treatment goals.

In 2005, Liberman et al. were the first to define remission criteria for schizophrenia.[2,3] Recovery is a state of symptom remission with involvement in work, independent living, and social activities on a regular basis.[2,3] The clinical and social/functional dimensions of outcome do not recover at the same rate.[4] Certain factors have been reported to be correlated with poor outcomes includes family history of schizophrenia, absence of adverse life event, structural brain abnormalities and tardive dyskinesia. There are 6 most relevant predictors of symptomatic remission: shorter duration of untreated psychosis, better premorbid adjustment, lower severity illness scores at baseline, better functioning at baseline, early improvement of symptoms and functioning, medication adherence.[5] However, despite the extensive literature available on the outcome and its predictors in schizophrenia, there is limited evidence regarding remission rates of schizophrenia in Indonesia. One cross-sectional study about remission was conducted by Kurihara T (2011) at community setting but it still lacks study in clinical setting.[6]

The aim of the present study was to examine schizophrenic outpatients for 12-months

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using standardized and reliable outcome measurement scales.

Materials and methods

Subjects

Data were collected in an outpatient facility at Cipto Mangunkusumo National Referral Hospital Jakarta, Indonesia, between January 2016 and January 2018. At baseline, total sample of 323 discharge patients were included this study, 223 among them met the criteria. All patients diagnosed with schizophrenia and schizoaffective disorder according to the DSM-IV criteria (aged 18-65 years) were included in the study. Exclusion criteria were head injury, history of major medical illness, and drug/alcohol dependency. Informed written consent was provided by all participants in the study, and the study protocol was approved by the local ethics committees. This observational study was part of clinical research project of hallucination on schizophrenia. Follow-up assessment was performed every month for a total of 12 months using the Positive and Negative Syndrome Scale (PANSS) remission criteria (i.e., lower symptom score of 8 core symptoms for ≥6 consecutive months).

Assessment

DSM-IV diagnoses were verified by a clinical researcher based on the Indonesian version of the Structured Clinical Interview for DSM-IV. Sociodemographic and course-related variable data were collected using a standardized documentation system.

Symptom severity was assessed via the PANSS remission criteria. The Global Assessment of Functioning Scale (GAF) was introduced to evaluate the psychological, social, and occupational functioning of patients. All raters had been training in the use of this scales.

Statistical Analysis

Remission criteria was defined by Andersen et al. as a PANSS rating of “mild’ or better (i.e. 3 points or less) at all 8 PANSS core items. Comparisons between patients achieving or not achieving remission in course-related variable were performed using the Wilcoxon and Fischer’s exact tests. Logistic regression models were applied to identify relevant predictors of remission using a backward-forward method. All clinical variables with a $p < .1$ in the univariate analysis were included in the model. All statistical analyses were conducted using a program from IBM® Statistical Package for Social Sciences (SPSS) version 20.

Results

A high inter-rater reliability for using scales was achieved (ANOVA-ICC > 0.8). Demographic and sociodemographic of the subjects are indicated in Table 1.

	Mean (SD) or Frequency
Age	34 (±10.65)
PANSS total score at discharge	54 (± 18.32)
Number of hospitalizations	1-5 kali (80%)
	5-10 kali (20%)
Duration of illness	
	6-10 years (80%)
	10-20 years (15%)
GAF score at discharge	>20 years (5%)
	65 (±12.28)

Table 1. Demographic and clinical data at baseline.

Dimension of psychopathology	PANSS items	PANSS score
Psychoticism (reality distortion)	Delusion (P1)	4.2 (±1.0)/5
	Unusual thought content	4.3 (±1.1)/5
	Hallucinatory behavior (P3)	3.8(±1.1)/4
Disorganization	Conceptual (P2)	2.3(±1.2)/3
	Mannerism (G5)	2.2(±1.2)/3
Negative-symptoms (psychomotor poverty)	Blunted affect (N1)	4.0(±0.9)/4
	Social withdrawal (N4)	4.2(±1.0)/5
	Lack of spontaneity (N6)	4.0(±1.0)/5

Values are mean, standard deviation (±SD)/75th percentile unless otherwise state; PANSS = Positive and Negative Syndrome Scale.

Table 2. Threshold level for each remission criteria symptoms (n=223) according to three-factor models of schizophrenia

At the mid-point of the follow-up period (i.e., 6 months), 137/223 (61%) patients met the criteria for symptomatic remission. We examined what item that hinder non-remitter to achieve the remission criteria in a single PANSS-remission-item analysis. Patient scored > 3 points on the item “social withdrawal” (56% of the patients). The threshold level for each remission criteria is indicated in Table 2.

At the end of the follow-up period (i.e., 12 months), 64/80 (80%) patients achieved remission. Factors predicting symptom remission is displayed in Table 3. A significant correlation

(*P* < .05) was found between symptomatic remission and the GAF score. Symptomatic remission was associated with family history of mental illness (odds ratio [OR]: 0.41 95% confidence interval [CI]: 0.20–0.84), onset of illness (OR: 0.42 95% CI: 0.12–0.42), type of antipsychotic treatment (OR: 1.12 95% CI: 1.21–1.34), and prescription pattern (OR: 0.41 95% CI: 0.10–0.43).

	b	OR	95% CI	p
Relatives with	1.02	0.41	0.2 to 0.84	<0.05
psychotic disorders	0.83	0.42	0.12 to 0.42	<0.05
Earlier onset of	0.29	1.12	1.21 to 1.34	<0.05
illness	0.76	0.41	0.10 to 0.43	<0.05
Antipsychotics	0.28	1.31	1.22 to 1.47	<0.05
Typical type				
Polypharmacy				
prescription pattern				
Lower GAF score				

Table 3. Factors predicting symptom remission

Discussion

After 12 months of follow-up, 80% of the schizophrenic patients included in this study achieved remission. This finding is consistent with those of previous studies [4]. The PANSS remission item analysis revealed that the negative symptoms domain predominantly hindered the remission rates among patients. Moreover, it demonstrated that patients with improved negative symptoms were more likely to achieve symptomatic remission.[7,8] Furthermore, patients with significantly lower scores on the PANSS negative item at admission highlights the influence of negative symptoms on long-term outcomes.[8]

Consistent with the results of previous studies, our findings suggest that patients with an earlier onset of illness and those without a family history of mental illness are significantly more likely to achieve remission. Immonen et al. demonstrated that earlier age at onset has been associated with lower probability of symptomatic remission and more hospital admission and poor functionality.[1] They suggested that this observation is related to poor cognition at an earlier onset age type. Collectively, these findings emphasize the importance of early control of symptoms in optimizing treatment outcomes for schizophrenic patients. Especially early intervention service for younger patients.[1,5]

A comparison of antipsychotic agents showed significant differences in remission rates. Although the atypical and typical antipsychotic agents have been shown to be similarly effective, the former are associated with a lower incidence of side effects. Therefore, the use of atypical antipsychotic agents may result in lower relapse rates and higher remission rates. [9-13]

In addition, our results showed that patients treated with more than 1 antipsychotic agent are linked to lower remission rates, which may be attributed to the development of resistance to treatment. However, further studies involving longer follow-up durations are warranted to examine this hypothesis.

The strengths of this study are its longitudinal design and the use of standardized and reliable scales for measuring disease outcomes. In contrast, the limitations of this study included the treatment of patients under naturalistic conditions. This approach is less effective in monitoring the impact of psychological and pharmacological treatment.

Conclusions

Less patients achieving remission highlight the need to implement more specific treatment strategies to improve long-term outcomes. Predictors of remission were early onset of illness, absence of family history of mental illness, use of atypical antipsychotic agents, and monotherapy. Some of these predictors are potentially modifiable and should become targets for clinical care. This result underlining the need to implement more specific treatment strategies to improve long term outcome for patients with high risk of non-remitting.

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Declaration of Interest

The authors report no conflicts of interest.

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