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Original article

Psychosocial functioning in relation to symptomatic remission: A longitudinal study of first episode schizophrenia

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ABSTRACT

Objectives: The aims of the study were: (1) to evaluate longitudinally symptomatic remission in first-episode (FE) schizophrenia, (2) to describe symptoms, social functioning and quality of life (Qol) in relation to remission status, and (3) to determine the long-term outcome of schizophrenia and its early predictors.
Methods: Sixty-four patients were assessed 1 month after a first hospitalization (T1), 12 months (T2), 4–6 years (T3), and 7–11 years (T4) after T1. The patients were allocated to three remission groups according to their remission status over the whole observation period, e.g. stable remission (SR), unstable remission (UR) and non-remission (NR). The PANSS, Social Functioning Scale and WHOQoL were used to evaluate the patients' psychosocial functioning levels, symptomatic and functional remissions and satisfying QoL. A good outcome was defined as meeting, simultaneously, the criteria of symptomatic and functional remissions and satisfying QoL at T4, while failure to meet all of these criteria was defined as a poor outcome.
Results: Among them, 17.2% patients were in stable remission, 57.8% in unstable remission and 25.0% were unremitted at all time points. The SR group had lower levels of psychopathological symptoms and reported better social functioning and QoL than the NR group. During the follow-up, the symptoms increased, social functioning slightly improved and QoL did not change. At T4, 53% of the sample had a poor outcome, which was independently predicted by the longer duration of untreated psychosis and a lack of satisfying QoL at T1.
Conclusions: Our results demonstrate that: (1) the long-term course in schizophrenia is heterogeneous and that three illness trajectories exist, (2) social functioning and QoL are only partially connected with symptomatic remission (3), the risk of a poor outcome may potentially be reduced by appropriate interventions at an early stage of the illness.

1. Introduction

For decades, the main objectives of the treatment of schizophrenia have been the reduction of clinical symptoms and the prevention of relapses [26]. With advances in psychopharmacology and the development of non-pharmacological therapies, community care and consumer movements, the objectives of treatment have been extended to include the optimal functioning of patients in normal life [4,44]. As a consequence, the areas of evaluation of schizophrenia now include social functioning and subjective quality of life (QoL) [21]. In this context, concepts such as symptomatic remission, functional remission and adequate QoL have been used [44,18].

In 2005, The Remission in Schizophrenia Working Group (RSWG) proposed a set of criteria for symptomatic remission [2]. Subsequently, numerous studies have been published, most of them summarised by Al Aqeel and Margolese [1], Gaebel et al. [22], Lang et al. [40], and Zimmermann et al. [52]. These indicate that the number of patients meeting the remission criteria range from 17 to 78% in first-episode (FE) schizophrenia and from 16 to 62% in multi-episode patients.

So far, only a few studies have analysed the relationships between symptomatic remission, social functioning and QoL. According to recent investigations, patients in remission usually

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obtain better social functioning and QoL than those without remission [7,9,10,34,38,50]. Therefore, remission status appears to be a valid indicator of social functioning and QoL [52]. However, not all patients in remission achieve a good level of social functioning and adequate QoL, since the proportions of such patients are estimated at 30–72% and 67–82%, respectively [38,39].

Studies on remission and outcomes in schizophrenia are usually accompanied by analyses of their predictors, including premorbid, baseline and early course factors. Most authors have focused on predictors for a good outcome and, in that respect, they have agreed that early clinical and functional improvement, lower psychopathology, and better functioning at baseline are associated with a greater chance of a favourable outcome after several years of the illness [39,3,16,37,36,47,20]. In turn, a longer duration of untreated psychosis (DUP), higher intensity of negative symptoms at baseline and lower education were found to be predictors of an unfavourable outcome [16].

Most studies on the relationships between remission, functioning and QoL have covered relatively short observation periods and were cross-sectional [9,10,34]. Furthermore, some follow-up prospective studies did not trace the same patients involved, reported findings from first and final assessments only [7,50,27], or involved patients participating in special therapeutic programmes [38,50,12].

From this perspective, naturalistic follow up studies of the same patients with a longer observation time taking into account dynamic changes in psychosocial functioning, in association with a differentiated pattern of clinical course of the illness, would be especially important. They would allow for a better understanding of the long-term course of schizophrenia and the relationships between remission, social functioning and subjective QoL that can, but do not necessarily, overlap [43].

Therefore, the aims of the present study were:

- to evaluate, longitudinally, the symptomatic remission in FE schizophrenic patients;
- to analyse psychopathological symptoms, social functioning and QoL in distinct patient groups selected on the basis of their symptomatic remission status;
- and to assess the 7–11-year outcome of the illness and to identify its predictors among baseline, pre-admission and early outcome variables.

2. Methods

2.1. Study design and participants

The present work is a continuation of our prospective study of a cohort of patients hospitalized for the first time due to the FE of schizophrenia between 1998 and 2002. The patients were evaluated at 1 month after discharge (Time 1 [T1]), 12 months after T1 (Time 2 [T2]), 4–6 years after T1 (Time 3 [T3]) and 7–11 years after T1 (Time 4 [T4]). The total period of observation was 7–11 years (mean = 8.1, standard deviation [SD] = 0.6). The inclusion criteria and previous results have been described earlier [24,23,32].

Initially, a group of 86 patients participated in the study (52 male, 34 female). Between T1 and T4, 22 patients (10 male, 12 female) dropped out, the reasons being refusal to continue participation ($n = 18$), an inability to locate ($n = 3$), and death due to suicide ($n = 1$). The final group therefore consisted of 64 patients (42 male, 22 female). All participants received information about the study and gave their consent to participate. The study was approved by the bioethics committee of Poznan University of Medical Sciences.

2.2. Measures

Psychopathological symptoms and symptomatic remission were evaluated on the Positive and Negative Syndrome Scale (PANSS) [35]. Symptomatic remission was understood to mean fulfilling the symptom severity criteria proposed by the RSWG group [2], but without the time criterion [28]. The severity criteria include 8 symptoms, reflected in PANSS as P1 (delusions), P2 (conceptual disorganization), P3 (hallucinatory behavior), N1 (blunted affect), N4 (passive/apathetic social with-drawal), N6 (lack of spontaneity), G5 (mannerism and posturing) and G9 (unusual thought content). None of these symptoms can be scored higher than 3 points.

If symptomatic remission was present at all four times (T1, T2, T3 and T4) of the observation it was defined as stable remission (SR). If there were no symptomatic remissions throughout the observation period it was regarded as non-remission (NR). If symptomatic remission occurred, but not at all four time points, it was considered unstable remission (UR). These three categories, namely SR, UR and NR constituted the symptomatic remission status variable.

Social functioning was assessed by means of the Social Functioning Scale (SFS) [5,51] which is composed of 97 items grouped in 7 subscales. The standardised total score is the mean of the subscale scores and ranges from 50 to 145 with higher score representing better functioning. For the purpose of this study, only the total score has been used. Patients who scored above the normative mean, (equal to the 100 points with a 1 SD = 15), set by Birchwood [5], based on a sample of 334 outpatients with schizophrenia, were classified as those with good social functioning and regarded as functional remission.

Subjective QoL was evaluated using the WHOQoL–Bref Scale. This consists of 24 questions scored in 4 domains, plus 2 additional general questions about satisfaction with the overall QoL and health. The total score ranges from 26 to 130 [31,46]. Based on the population standard for life satisfaction proposed by Cummins (1995) [13], a cut-off point at 75% of the maximum total score was used as the criterion of an adequate, i.e., satisfying QoL.

Meeting the criteria of symptomatic and functional remission and adequate QoL at T4 (after 7–11 years of follow-up) simultaneously was considered as a good outcome. Failure to meet any of these three criteria at T4 was treated as a poor outcome. Meeting only one or two out of these three criteria at T4 meant a moderate outcome.

Overall social adjustment preceding the first hospitalization by one year was measured with the Global Assessment Scale (GAS) [19]. A GAS score ≤ 50 was treated as poor social adjustment. In addition, a semi-structured questionnaire was used to gather sociodemographic and clinical data from the patients, their medical records and their family members or other caregivers. Among the clinical data, information about the duration of untreated psychosis (DUP) and the systematic usage of antipsychotic drugs was recorded. DUP was defined as the time from the appearance of the first psychotic symptoms to the first psychiatric hospitalization. The systematic usage of antipsychotics means that the patient had been taking the medications, as prescribed throughout the whole observation period, as reported by the patient and his/her family member or caregiver.

2.3. Statistical analysis

Changes in the PANSS, SFS and WHOQoL scores were examined with the use of repeated measure analysis of variance (ANOVA). The Greenhouse–Geisser correction was employed when the assumption of sphericity was violated. If significant differences were found, Bonferroni post-hoc comparisons were conducted in order to determine which groups differed from the others. Cross-sectional