Original article

Age at the time of onset of psychosis: A marker of specific needs rather than a determinant of outcome?

P. Golay [a,b,*], L. Alameda [a,c,d], N. Mebdouhi [a], P. Baumann [a,c], C. Ferrari [a], A. Solida [a], P. Progin [a], J. Elowe [e], P. Conus [a]

[a] *Service of General Psychiatry, Treatment and Early Intervention in Psychosis Program (TIPP-Lausanne), Lausanne University Hospital (CHUV), 1003 Lausanne, Switzerland*
[b] *Service of Community Psychiatry, Department of Psychiatry, Lausanne University Hospital (CHUV), 1003 Lausanne, Switzerland*
[c] *Unit for Research in Schizophrenia, Center for Psychiatric Neuroscience, Lausanne University Hospital (CHUV), 1008 Lausanne, Switzerland*
[d] *Psychiatric Liaison Service, Lausanne University Hospital (CHUV), 1011 Lausanne, Switzerland*
[e] *Mobile Psychiatry Unit, Department of Psychiatry, Prangins Psychiatric Hospital (CHUV), 1197 Prangins, Switzerland*

ABSTRACT

Background: While there is suggestion that early onset of psychosis is a determinant of outcome; knowledge regarding correlates of later onset age is more limited. This study explores the characteristics of patients developing psychosis after age 26, towards the end of the usual age range of early intervention programs, in order to identify potential specific needs of such patients.
Methods: Two hundred and fifty-six early psychosis patients aged 18–35 were followed-up prospectively over 36 months. Patients with onset after 26 ("later onset", LO) were compared to the rest of the sample.
Results: LO patients (32% of the sample) had shorter DUP, were less likely to be male, had better premorbid functioning and were more likely to have been exposed to trauma. They had greater insight at presentation and less negative symptoms overall. The trajectories for positive and depressive symptoms were similar in both groups. Evolution of functional level was similar in both groups, but while LO patients recovered faster, they were significantly less likely to return to premorbid functional level.
Conclusions: Later psychosis onset correlates with better premorbid functioning and higher rate of trauma exposure; the latter should therefore be a treatment focus in such patients. LO patients were less likely to return to premorbid functional level, which suggests that current treatment strategies may not be efficient to help patients maintain employment. The possibility of distinct illness mechanisms according to onset age and the more central role for trauma in patients with onset after age 26 needs to be further explored.

© 2017 Elsevier Masson SAS. All rights reserved.

1. Introduction

Textbooks usually list early age of onset (before age 18) as a rather robust predictor of poor outcome in schizophrenia. It is well documented that early onset schizophrenia is characterized by a progressive beginning rather than acute onset, associated with enduring negative symptoms followed by attenuated positive symptoms [1–3]. Some results in the literature are nevertheless inconsistent, available papers showing either a positive [4], a negative [5] or the absence of any effect [6,7]. Age of onset is also correlated with different courses of cognitive deterioration

[8,9]. Most importantly, it has been shown that age at onset is a stronger determinant of neurocognition and social cognition levels than the age at the time of assessment [9,10].

Much fewer papers have explored the implications of late (onset after age 45) and very late (after 65) onset of schizophrenia, but available data suggests it may correlate with more positive symptoms and less negative symptoms [11,12]. Although inconsistent, these elements strongly suggest that age at onset may determine specific needs and outcomes in psychosis patients.

Early intervention programs, most commonly providing treatment to patients aged 18 to 35, aim at proposing interventions geared to specific patients' needs. Based on our clinical observation, we realized that patients with a "later onset" (after age 26) often deal with specific challenges and displayed a different pattern of outcome than patients with earlier onset. Liu et al. [13] have found, through admixture analysis, that age 19 and 26 were

relevant cut-off to identify clusters in early psychosis (EP) samples, and while most early psychosis programs in Australia do not include patients after age 26 [14], previous publications have shown that the proportion of patients with an onset after 26 is substantial [14,15]. On this basis, we explore in this paper premorbid, baseline and outcome characteristics of patients with psychosis onset after age 26 ("later onset", LO) and compare them to the other patients of our EP sample.

2. Material and methods

2.1. Procedure and participants

Launched in 2004 at the Department of Psychiatry in Lausanne University Hospital, Switzerland, the Treatment and early Intervention in Psychosis Program (TIPP) is a specialized early psychosis program. Inclusion criteria are age between 18–35; living in catchment area (population about 300,000) and meeting criteria for psychosis, as defined by the 'psychosis threshold' subscale of the Comprehensive Assessment of At Risk Mental States (CAARMS) scale [16]. The program is a public integrated program which offers outpatient case management, assertive community treatment and an inpatient unit for a 36 months period. Patients can be addressed to TIPP from any psychiatric facility as soon as a diagnosis of psychosis is made and as long as patients have not had more than 6 months of previous treatment for psychosis. The program has been detailed elsewhere [17]. If patients have psychosis related to intoxication or organic brain disease, an intelligence quotient < 70 or have been taking antipsychotic medication for more than six months, patients are referred to other programs. This allows admission of patients who would have been treated unsuccessfully for a small amount of time and we therefore refer to early psychosis (EP) rather than to first episode psychosis (FEP). Access to the TIPP clinical data was granted by the Ethics Committee of the Faculty of Biology and Medicine of Lausanne University and consequently, all patients who received treatment within this program were included in this study.

2.2. Measures

An ad hoc questionnaire was completed by the case managers (CM) who have up to a hundred contacts with patients during the 36 months of treatment. The case manager (CM) is a clinician (either a psychiatric nurse or a social assistant) who both coordinates and provides treatment and follow-up to patient, along with a psychiatrist, over the entire 36 months treatment period; CMs are available for up to 2 home visits per week and on average patients have more than 100 contacts with CM over the treatment period. [17,18]. The questionnaire allows the detailed evaluation of past medical history, demographic characteristics, exposure to adverse life events as well as symptoms and functioning. It is completed on the basis of information gathered from both patients and family during the beginning of treatment. Should new information emerge, it can be updated at any time during follow-up. At baseline and after 2, 6, 12, 18, 24, 30 and 36 months of treatment, a series of assessments focused on the evolution of symptoms and functional level are conducted by a psychologist and by case managers. This study is based on the prospective follow-up of the first 256 patients who were treated at TIPP.

2.2.1. Diagnostic assessment

Expert consensus based diagnosis results from the following elements: diagnosis reported by a treating psychiatrist (all medical documents including discharge documents after hospital admissions) and assessment by case managers over the 36 months of treatment. The consensus is carried out by a senior psychologist (CF) who is in charge of scale-based assessment over the follow-up and a senior psychiatrist (LA). The entire file is reviewed after 18 and 36 months, or at discharge. The diagnostic process is based on criteria from the DSM-IV [19]. In this paper, only the final diagnosis was used.

2.2.2. Sociodemographic, clinical and functional data at baseline

Duration of untreated psychosis (DUP) is defined as the time between onset of psychotic symptoms defined by CAARMS and admission to TIPP. Socioeconomic status (SES) was subdivided into low, intermediate and high [20]. Functional characteristics at baseline were assessed according to both the Modified Vocational Status Index and the Modified Location Code Index Independent living [MVSI & MLCI] [21]. Migration in adversity was considered when migration occurred in adverse contexts such as:

- seeking protection for political reasons;
- threat of death;
- exposure to war or extreme poverty.

Past psychiatric diagnoses were assessed according to DSM-IV criteria [19] while past suicide attempts were listed using ICD-10 classification [22]. Premorbid functional level was evaluated with the Premorbid Adjustment Scale [PAS] [23]. Academic and social sub-scores were computed as well as childhood and early adolescence sub-scores [24]. Past history of trauma was evaluated by case managers over the entire treatment phase and in the context of a trusting relationship [25,26]. In this study, patients were considered exposed to trauma if they had faced at least one experience of sexual or physical abuse prior the age of 16. Past diagnosis of substance abuse or dependence was rated according to DSM-IV criteria by case managers.

The Global Assessment of Functioning [GAF] [19] and the Social and Occupational Functioning Assessment Scale [SOFAS] [19] were used in order to assess the functional level at baseline. While GAF also includes the intensity of symptoms, SOFAS only takes social and occupational level into account. The lowest SOFAS and GAF score before presentation was also estimated. Insight into illness was evaluated as complete, partial or absent on the basis of one item [27].

2.2.3. Outcome measures after 2, 6, 12, 24, and 36 months of follow-up

Psychopathology and functional level were scored at each assessment, with SOFAS, GAF, the Positive and Negative Syndrome Scale [PANSS] [28] and the Montgomery-Asberg Depression Rating Scale [MADRS] [29]. A psychologist who was independent of patients' treatment and had received standardized training prior to the study conducted the symptoms assessment. For the PANSS, Interrater agreement standards [30] were confirmed through training with videotaped interviews and consensus reference ratings.

2.2.4. Outcomes definitions at discharge

Symptomatic remission at discharge was defined at the last PANSS assessment of the last year of the program following Andreasen's Criteria [mild or lower (≤ 3) score on the following items: delusion, unusual thought content, hallucinatory behaviour, conceptual disorganization, mannerisms, blunted affect, social withdrawal & lack of spontaneity] [31]. Functional recovery was defined as a final PAS score equal or lower to the premorbid rating on four of the five PAS general scale's items [32]. Items on education and abruptness in the change in work were ignored, considering they could not have changed during the period of interest [27]. Patients were considered as "living independently"