Pattern of Lifetime Axis I Morbidity among a Treated Sample of First-Episode Psychosis Patients

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Key Words

First-episode psychosis • Comorbidity • Psychiatric assessment • Axis I diagnosis • Early intervention

Abstract

Background: While the problem of significant comorbidity in first-episode psychosis (FEP) is well known, little is known about the pattern of onset of disorder prior to and during FEP. The current study examined Axis I psychiatric comorbidity in 62 people being treated for FEP. **Method:** Morbidity in the years prior to the diagnosis of psychosis was assessed retrospectively, while comorbidities during the 15 months after psychosis diagnosis were investigated prospectively via structured clinical interview. **Results:** Prevalence of morbidity was high, with 84% of patients having an Axis I psychiatric disorder during at least one phase (i.e. either prior to, during or following the FEP). Sixty-nine percent had one or more psychiatric diagnoses in their lifetime prior to admission for FEP and 47% had one or more comorbid disorder concurrently with FEP. Substance use disorders were most prevalent prior to admission and at 15-month follow-up, while mood disorders were most prevalent during acute psychosis. **Conclusions:** The study shows the large amount of Axis I comorbidity in young people with FEP. Issues for treatment of comorbidities are discussed.

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Introduction

Psychiatric comorbidity is a significant problem in first-episode psychosis (FEP). Over half of the patients with FEP have at least one comorbid Axis I disorder [1, 2]. In addition, people diagnosed with psychotic disorders are at greater risk of other psychiatric disorders before the onset of psychosis [3, 4]. Little is known however, of the pattern of morbidity over the first psychotic episode – from before psychosis, through the acute FEP, to recovery from the first episode.

Searches of the MEDLINE database from 1950 to the present using a combination of the following search terms: ‘first episode psychosis’; ‘early psychosis’; ‘first episode schizophrenia’; ‘comorbid’; ‘depression’; ‘anxiety’; and ‘substance’, yielded few research papers. Only three studies assessed the range of Axis I disorders and found comorbidity rates of between 34 and 69% [1, 2, 5]. In a sample of 102 people with FEP, 52% had a comorbid psychiatric diagnosis and 38% had more than one diagnosis [2]. The lower rate of 34% comorbidities was found in a sample of 131 inpatients with FEP [5]. However, this study excluded comorbidities that were secondary to the psychosis. Depression was found in 22% of people with FEP [6, 7] and had reduced to 7% 1 year after the first episode [7]. Social phobia was found in 32% [8], and obsessive-compulsive disorder in 4–15% of people with FEP [2, 9–

11]. Substance abuse or dependence was found in 37–44% of patients with FEP at first admission [12, 13].

Few studies have addressed the effect of the presence of a comorbid disorder on patients with FEP. Sim et al. [5] found that, while those with comorbidities in the first episode of psychosis had less severe positive symptoms, they also had poorer quality of life than those without comorbidities. Another study found that depression was associated with poorer quality of life and better insight in a group with FEP [14]. Insight and paranoia were found to predict depression in one of the only prospective studies of comorbid depression in FEP [15]. These studies show that a complex relationship exists between comorbidities, FEP and other factors such as psychotic symptoms, insight and quality of life – a relationship which is little understood at present. However, most of these studies were cross-sectional in nature and thus, only captured comorbidity at one time point in the first episode of psychosis.

In terms of morbidity that precedes the onset of psychosis, an antecedent subtype of morbidity that had onset over a year prior to the onset of psychosis was found in 56% of a group of 71 patients with FEP [1]. One prospective study found that 27% of males admitted to psychiatric hospitals with a diagnosis of schizophrenia had received a non-psychotic diagnosis at 16–17 years of age compared with only 7.4% of the nonpsychotic population [3]. Another prospective study found that 38% of men diagnosed with schizophrenia had been given a nonpsychotic psychiatric diagnosis at conscription at 18 years of age [4]. Substance use disorders (SUD) prior to onset of psychosis have been more widely researched and it has been found that 71–74% of people with FEP had a SUD in their lifetime [16, 17].

Only SUD have been studied in terms of the continuity between its presence prior to, concurrently with, and immediately after onset of FEP. In a file audit of 643 patients with FEP, 74% had a lifetime SUD, 62% had a SUD in the 3 months prior to admission and 36% had a SUD 18 months later [17]. In a study of 103 FEP patients using prospective semistructured interviews, it was found that 73% of patients with a lifetime SUD continued their use during the 15 months after onset of FEP [18]. These studies show high rates of SUD both before and after onset of FEP and provide evidence for the need for SUD treatment in the context of the FEP.

There is a lack of research investigating the pattern of morbidity other than SUD prior to, during and following the first episode of psychosis. As such, the aim of the current study was to describe the pattern of Axis I psychiat-

ric morbidity before, concurrently with, and during the 15 months after first admission in a treated sample of young people with FEP.

Method

Sample

The data presented here were derived from baseline and 15-month follow-up assessments of patients enrolled in a randomized-controlled trial comparing a Cognitive Behavioral Therapy (CBT) intervention known as Active Cognitive Therapy for Early Psychosis (ACE) with a control therapy known as Befriending in the treatment of FEP. Patients received usual background treatment (i.e. comprehensive case management, psychiatrist, group program, etc.) in addition to participation in the ACE trial.

The study was conducted at the Early Psychosis Prevention and Intervention Centre (EPPIC), a government-funded service within ORYGEN Youth Health (Melbourne, Australia) that treats young people experiencing FEP (including affective and nonaffective psychoses). Ethics approval was obtained from the North-west Mental Human Research Ethics Committee and written informed consent was obtained from patients.

The participants were 62 patients aged 16–28 years (mean = 22.3 years, SD = 3.5). Seventy-three percent of the sample were male ($n = 45$) and most were Australian born (79%). Eight participants received a diagnosis of schizophrenia at baseline, 25 were diagnosed with schizophreniform disorder, 5 with delusional disorder, 7 with schizoaffective disorder, 11 with major depressive disorder with psychotic features, 2 with bipolar disorder with psychotic features, and 4 with psychosis not otherwise specified. Fifty-five of the 62 patients were assessed at 15-month follow-up, giving an attrition rate of approximately 11%.

Measures

At baseline and 15-month follow-up, primary psychotic diagnosis (regarded as the principal diagnosis) and other current (within the previous month) or lifetime Axis I diagnoses were assessed using the Structured Clinical Interview for DSM-IV-Patient Edition (SCID-IV) [19]. Two research assistants (K.A. and T.J.) were employed in order to recruit patients and undertake diagnostic assessments with the SCID-IV. Both had a minimum of honors degrees in psychology and were trained and experienced in SCID-IV assessments. In completing the SCID-IV, information was primarily obtained by interview with the patient; however, file notes and other informants (i.e. family members and treating clinicians) were also consulted if necessary. Demographic information was also obtained from patients and their medical records.

In describing the pattern of Axis I morbidity, diagnoses were categorized relative to first admission for FEP. Therefore, three categories of occurrence were defined: (1) lifetime morbidity – morbidity that had resolved prior to admission for FEP; (2) concurrent – a comorbidity present concurrently with FEP, and (3) 15-month morbidity – present at 15 months after admission.

For the purposes of the current study, nonpsychotic morbidities were grouped into four categories: mood (which included major depressive disorder, dysthymia and depressive disorder not

otherwise specified), anxiety (which included social phobia, generalized anxiety disorder, post-traumatic stress disorder, specific phobia, obsessive-compulsive disorder and anxiety disorder not otherwise specified), substance (which included both dependence and abuse of a range of substances), and other (which, in this sample, included eating disorders and somatoform disorders). Some patients had multiple substance misuse disorders, but for the purposes of this study these were recorded as a single substance misuse disorder.

Results

Pattern of Morbidity

The presence of any kind of Axis I disorder at each time point was recorded for the 55 patients who completed baseline and 15-month assessments (fig. 1). The three inner, overlapping circles depict the patients who were assessed as having a comorbid diagnosis at least one time in the study. Numbers in the sectors where the circles overlap depict the number of patients who had comorbidities at more than one time point. For example, the middle sector of the overlapping circles shows that 13 patients (24%) had a disorder at every time point, that is, prior to, during and after the first admission.

The diagram shows that 84% ($n = 46$) of patients had another Axis I disorder in addition to psychosis at some time prior to, during, or in the 15 months after their first episode of psychosis (this is the total number of patients in the inner circles). Seventy-seven percent ($n = 20$) of those who had a concurrent comorbidity also had a lifetime disorder prior to the FEP. Eighty-one percent ($n = 21$) of those with a 15-month morbidity also had a lifetime morbidity prior to the FEP.

Lifetime Disorders

Lifetime disorders that resolved prior to first admission were inspected using data from the total sample of 62. Sixty-nine percent ($n = 43$) of patients had one or more Axis I disorders in their lifetime. Twenty-three percent ($n = 14$) of people had two or more disorders. In terms of type of morbidity, 34 patients had substance misuse disorders, 17 had mood disorders, 4 had anxiety disorders and 2 had other disorders.

Concurrent Disorders

Forty-seven percent ($n = 29$) of patients had one or more comorbid disorders and 16% had two or more disorders present when assessed within 6 weeks of admission to EPPIC. Mood and anxiety disorders were the most prevalent, with 34% of the comorbidities being a mood

Fig. 1. Number of patients with Axis I diagnoses at different times relative to the first episode of psychosis. Lifetime = Resolved prior to FEP; Concurrent = concurrent with FEP; 15-month = present at 15-months after FEP; Never = no comorbidities at any time point.

disorder and 40% being an anxiety disorder. Substance misuse comprised 17% of the comorbid disorders and other disorders comprised 9%.

Onset of Concurrent Disorders

These concurrent disorders were categorized into two times of onset: onset prior to FEP and onset concurrent with FEP. Onset prior to FEP was operationalized as onset any time before the year prior to admission to EPPIC in order to capture the disorders that were present for a long time before admission. Onset concurrent with FEP was operationalized as onset any time within the year before admission to EPPIC. Figure 2 shows the time of onset and category of concurrent disorders. Forty-six percent ($n = 16$) of concurrent disorders had been present over 1 year prior to admission to EPPIC while 54% ($n = 19$) developed within 1 year of admission.

Concurrent mood disorders were found to onset 1 year before and within 1 year of the first admission. Substance misuse was most commonly present 1 year before the first admission. Anxiety disorders most commonly occurred within the year of admission, although some ($n = 4$) were onset over 1 year before admission.

Fig. 2. Number and time of onset of different types of concurrent comorbid disorders.

Comorbid Disorders at 15-Month Follow-Up

Development of Axis I disorders in the time after acute psychosis was assessed 15 months after entry to EPPIC with a total of 55 patients. Thirty-eight percent ($n = 21$) had developed one or more disorders in the 15 months after admission to EPPIC. Eighteen percent ($n = 10$) had two or more disorders. In terms of diagnostic breakdown, 15 patients had substance misuse disorders, 8 had mood disorders, 10 had anxiety disorders and 2 had other disorders.

Discussion

The major finding in this study was that there was a high occurrence of SUD, mood and anxiety disorders prior to, during and within the 15 months following first admission for FEP. Only 16% of this sample never had a comorbid Axis I disorder within the time assessed. This is the first study to our knowledge to report the prevalence of comorbid Axis I disorder over the lifetime of a sample of patients 15 months after treatment for FEP.

The occurrence of disorder that had resolved prior to admission was high at 69% of the sample. This compares with a 38 and 27% rate of morbidity found prospectively in conscript studies of men who went on to receive a diagnosis of schizophrenia [3, 4]. Differences in these numbers may be due to a number of methodological issues, including prospective versus retrospective data collection, research versus clinical diagnoses, and/or diagnosis

of schizophrenia versus FEP. Alternatively, they may be due to differences in levels of substance misuse. Both prospective studies reported substance abuse prevalence of less than 14%, whereas 54% of the current sample had a SUD that had resolved 1 year prior to admission for FEP. While this figure is much higher than the two prospective studies, it is consistent with the recent finding of a prevalence of 71% of lifetime substance misuse in a sample from the same Australian site as the current study [16].

In terms of concurrent comorbidity, almost half of comorbidity concurrent with FEP developed over 1 year prior to admission. This is broadly consistent with another study that found over 80% of the concurrent comorbidity had developed prior to FEP [1]. The finding of high levels of resolved Axis I morbidity and of the early onset of half of the concurrent morbidity shows a pattern of high levels of disorder and disability over a long period in patients with FEP.

It has been suggested that this morbidity may be part of the psychosis prodrome [1]. This may be the case. However, it is important to note that these young people met full diagnostic criteria for Axis I disorders (according to a DSM-IV structured clinical assessment), which suggests that they experienced a significant level of disorder. Further to this, a significant minority (24%) of the whole sample had a comorbidity at every time point – that is, a resolved disorder prior to admission, a concurrent morbidity, and comorbidity in the 15 months after admission. These results show that many patients in this sample had an enduring psychiatric disability even while they were receiving early intervention for a psychotic illness [20]. The development of high quality specialist early intervention services for FEP [21] means that people with FEP may be receiving the most comprehensive treatment they will ever receive, in the approximately 18 months after their first episode of psychosis. This is an ideal time for comorbidities to be treated: patients may have access to both medical and psychosocial interventions and they may be highly motivated after the frightening experience of a FEP. In light of the current findings, it is important for FEP services to assess whether comorbidities are of recent onset or longstanding [22] and they should provide interventions based on this assessment. For example, a young person who has had a social phobia with an onset over a year prior to psychosis, and that continued through the onset of frank psychosis symptoms, should receive different treatment from a young person with a resolved history of cannabis abuse. The patient with social phobia should receive careful assessment of the relationship be-

tween phobia and psychotic symptoms. It may be that overvalued ideas have taken on delusional intensity and the patient may require cognitive behavioral therapy alongside neuroleptic treatment to treat the symptoms [for a case example, see 23]. The patient with a resolved cannabis abuse disorder should receive psychoeducation about the risks of cannabis use in people with psychosis and ongoing monitoring of substance use. A recent CBT intervention manual provides guidelines of different treatment approaches to prior onset and secondary comorbidities in FEP [24].

Substance misuse disorders were most prevalent 1 year prior to admission (i.e. lifetime) and in the 15 months after admission, but were less prevalent than both mood and anxiety disorders at admission. This may be because the frightening experience of acute psychosis had deterred some patients from substance abuse in the short-term, or that patients were too ill to use substances (e.g. hospitalization, avoidance of friends due to paranoia). Alternatively, it is possible that patients were underreporting their substance use. The increase in the rate of substance misuse over the 15-month follow-up suggests that substance misuse treatment should be incorporated in treatment planning, particularly if the patient has a lifetime history of substance misuse rather than if the patient has a substance misuse problem at the time of acute psychosis, since resumption of substance misuse is more likely to occur.

The study was limited by a small sample size with a treated sample. However, the high levels of comorbidity in a sample who received optimum standard treatment for FEP and additional psychological treatment (either CBT or Befriending) highlights the problem of comorbidity. Nevertheless, the results of this study need replication with a larger sample size and within other treatment settings. A second limitation is the retrospective nature of the assessment of Axis I disorder prior to admission. However, prospective studies examining this research question are difficult for practical reasons since an extremely large number of people would have to be prospectively assessed to eventually yield an adequate number of cases of FEP.

In conclusion, a high rate (84%) of young people with FEP were found to have at least one other psychiatric disorder at one time in their lives. It was also found that much of this morbidity occurred before treatment for FEP. This indicates the importance of early detection and intervention for Axis I diagnoses in young people and that integration of treatment for comorbidities is essential in FEP treatment.

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