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Treatment for the initial acute phase of first-episode psychosis in a real-world setting

AIMS AND METHOD

The aim of the study was to examine treatment for the initial acute phase of first-episode psychosis at the Early Psychosis Prevention and Intervention Centre. Information regarding treatment was collected from file notes for all patients (*n*=112). For a subsample of patients (*n*=68), remission of positive psychotic symptoms was assessed using standardised ratings at 3-month follow-up.

RESULTS

Treatment provided was largely in accordance with recommended treatment strategies. The majority (72%) of patients achieved rapid remission of positive symptoms.

CLINICAL IMPLICATIONS

Restrictive practices other than in-patient admission, such as in-patient seclusion, police transport or a community treatment order, can be minimised. The use of low-dose antipsychotic medication is an effective treatment strategy for the initial acute phase of first-episode psychosis.

The initial acute phase of first-episode psychosis is an early and significant opportunity to initiate effective and phase-specific treatment to improve patient outcomes (Malla & Norman, 2002). Recommended treatment strategies include reducing treatment delay, comprehensive assessment, minimising the use of restrictive and coercive practices, low-dose atypical antipsychotic medications, and maintenance of continuity of care (McGorry *et al*, 2003; National Collaborating Centre for Mental Health, 2003). Although a number of studies have examined treatment in real-world settings (e.g. Yung *et al*, 2003; Gorrell *et al*, 2004), few have provided detailed information about treatment and clinical response during the initial acute phase of first-episode psychosis (Lieberman *et al*, 1993; Power *et al*, 1998). Lieberman *et al* (1993) found that the median time to remission was 11 weeks in 70 patients with first-episode schizophrenia or schizoaffective disorder who were treated using a standardised protocol for antipsychotic medication. Power *et al* (1998) analysed data from the first 3 months of treatment for 231 consecutive patients accepted for treatment at the Early Psychosis Prevention and Intervention Centre (EPPIC) during 1995–1996. The main findings from the study were that two-thirds of patients were admitted to hospital and that 63% of patients achieved remission following treatment with low-dose antipsychotic medications. In the current study, we employed a similar method to Power *et al* (1998) to investigate treatment for the initial acute phase of first-episode psychosis.

Method

The EPPIC is a comprehensive treatment service mandated to treat all individuals aged 15–29 years experiencing a first psychotic episode who present to public mental health services in an urban catchment region of Melbourne, Australia. The EPPIC is an established service with a high profile, and there are few private psychiatrists or other health services in the region providing treatment for first-episode psychosis. As a result, EPPIC treats a high proportion of incident cases of psychosis aged 15–29 years in the catchment region.

A total of 112 consecutive patients were accepted for treatment at EPPIC between 19 March 2001 and 1 August 2001. Demographic details and treatment information regarding the first 3 months of treatment were obtained from file notes for all cases. Diagnostic information was derived from multiple sources that included a patient interview (*n*=108), as well as an informant interview with a family member and/or the treating medical officer and a review of the medical records (*n*=112). This information was then used to diagnose DSM–IV (American Psychiatric Association, 1994) psychotic and non-psychotic disorders based on an updated version of the Royal Park Multi-Diagnostic Instrument for Psychoses (McGorry *et al*, 1990).

Remission data at 3-month follow-up were available for 68 patients who were eligible for and participated in a follow-up research study (Wade *et al*, 2004). The

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inclusion criteria for the study were: age 15–29 years, fluency in English, ability to give informed consent and clear evidence of psychosis. The exclusion criteria were organic aetiology, intellectual impairment, history of brain damage or epilepsy, or more than 6 months of prior treatment for a psychotic disorder. Remission was defined as a score of 3 or less for at least 2 weeks on any of the following items of the Brief Psychiatric Rating Scale (Lukoff *et al*, 1986): hallucinations, conceptual disorganisation, unusual thought content and suspiciousness. For patients diagnosed with a functional psychotic disorder, there were no significant differences between patients with remission data (n=68) and without remission data (n=36) on the following variables: age, gender, marital status, educational level, in-patient admission, and maximum daily antipsychotic dose in haloperidol equivalents. However, patients with remission data were significantly more likely to be diagnosed with affective psychosis than patients with no remission data (38.2 *v.* 13.9%, χ^2=6.7, d.f.=1, P=0.01).

The research and ethics committees of the North-Western Mental Health programme approved the study.

Results

The mean age of the sample was 21.2 years. The majority of patients were male (64.3%), single (88.4%) and had incomplete secondary education (55.4%). Diagnostic information is presented in Table 1. Seven patients were diagnosed with a non-psychotic (cluster B personality) disorder despite presenting with apparent psychotic symptoms.

Key aspects of treatment are presented in Table 2. More than half the patients were referred by a crisis service, such as another mental health service or a hospital emergency department. Patients with affective psychosis were more likely to be referred by a crisis service compared with patients with non-affective psychosis or non-psychotic disorders (74.2 *v.* 46.6 and 57.1% respectively, exact P=0.03). Three-quarters of the patients were admitted to an in-patient unit at some stage during the first 3 months of treatment. Police were notified in approximately 1 in every 4 in-patient admissions, but were responsible for providing transport or a transport escort in only a small number of cases directly admitted to the EPPIC in-patient unit. More than 8 in every 10 hospitalised patients were admitted on an involuntary basis and 1 in every 6 patients was placed on a community treatment order (CTO), which provides a legal mandate for out-patient treatment. Approximately 1 in every 10 patients admitted to the EPPIC in-patient unit required seclusion.

Table 1. DSM–IV diagnoses (n=112)

DSM–IV diagnosis	*n* (%)
Non-affective psychosis, n=73	
Schizophrenia	41 (36.6)
Schizophreniform	17 (15.2)
Brief psychosis	1 (0.9)
Psychosis not otherwise specified	5 (4.5)
Delusional	4 (3.6)
Substance-induced	5 (4.5)
Affective psychosis, n=31	
Schizoaffective	11 (9.8)
Bipolar	18 (16.1)
Major depression	2 (1.8)
Psychosis owing to a general medical condition, n=1	1 (0.9)
Not psychotic, n=7	
Substance intoxication	2 (1.8)
Other	5 (4.5)

The mainstay of treatment for acute psychotic symptoms was atypical antipsychotic medications that included risperidone, olanzapine, and quetiapine. For all patients taking antipsychotic medication, the mean maximum daily dose was 4.7 mg/day haloperidol equivalent during the first 3 months of treatment. Only three patients did not receive antipsychotic medication, including one patient who refused all medication. A mood stabiliser was prescribed for 30 patients, including 17 of 18 patients with bipolar disorder and 5 of 8 patients with schizoaffective disorder (bipolar type). An antidepressant was prescribed for 19 patients, including both patients with major depressive disorder with psychotic features and all 3 patients with schizoaffective disorder (depressive type). The three patients who received electroconvulsive therapy (ECT) were diagnosed with an affective psychosis. Approximately 3 in every 4 patients had a physical examination and a similar proportion of patients had a haematology investigation. Only a minority of patients had a urinary drug screen, computed tomography (CT) or magnetic resonance imaging (MRI) scan, or an electroencephalogram (EEG).

The remission rate of positive symptoms at 3-month follow-up for patients with available data (n=68) was 72.1%. Patients with affective psychosis were more likely to achieve remission than patients with non-affective psychosis (92.3 *v.* 59.5%, χ^2=8.6, d.f.=1, P=0.003).

Discussion

This study examined key aspects of treatment for the initial acute phase of first-episode psychosis. The demographic and diagnostic characteristics of patients in the current study are similar to other studies undertaken at EPPIC (e.g. Power *et al*, 1998; Lambert *et al*, 2005). The finding that a small number of patients were subsequently diagnosed with a non-psychotic disorder is consistent with the findings of these previous studies and highlights the initial diagnostic uncertainty in patients referred with possible psychosis (Schwartz *et al*, 2000).

The finding that the referral source for most patients was a crisis service is consistent with studies of pathways to care in first-episode psychosis (e.g. Lincoln *et al*, 1998). It is probable that patients with affective psychosis were more likely to come to the attention of a crisis referral service owing to the acute onset and more severe behavioural disturbance associated with a manic syndrome. These findings suggest that mental health and

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Table 2. Key aspects of treatment for the initial acute phase of first-episode psychosis (*n*=112)

Variable	
Referral source[1], *n* (%)	
Private household	23 (20.5)
Community-based practitioner	27 (24.1)
Crisis service	62 (55.4)
In-patient care, *n* (%)	
Patients admitted on one or more occasions[2]	83 (74.1)
Patients admitted within first day of contact with psychiatric services[3]	73 (88.0)
Patients admitted on one occasion[3]	61 (73.5)
Patients admitted on two occasions[3]	18 (21.7)
Patients admitted on three occasions[3]	4 (4.8)
Patients readmitted within 28 days of discharge from first admission[3]	16 (19.3)
Duration of admission, days: mean (median, range)	
Total duration of EPPIC admission(s)	22.9 (18.0, 1–94)
Total duration of non-EPPIC admission(s)	14.3 (12.0, 1–63)
Total duration of all admission(s)	25.2 (20.0, 2–100)
Duration of first admission	21.3 (19.0, 2–75)
Duration of second admission	13.8 (9.0, 1–88)
Duration of third admission	6.0 (5.5, 4–9)
Coercive or restrictive practices, *n* (%)	
Police contact in events leading to any admission[3]	22 (26.5)
Police transport/escort to any EPPIC admission (transfers excluded)[4]	2 (3.6)
Patient status involuntary at first admission[3]	71 (85.5)
Patients placed on community treatment order	17 (15.2)
Patients required one or more episodes of seclusion during any EPPIC admission[5]	8 (11.9)
Duration of seclusion during any EPPIC admission, minutes: mean (median, range)	84.6 (52.5, 30–180)
Initial family contact, *n* (%)	
Patients whose family were contacted within 24 h of entry to EPPIC	93 (83.0)
Out-patient care[6], *n* (%)	
Patient seen at least fortnightly as out-patient	95 (96.0)
Patient seen for introduction to group programme	25 (25.3)
Medication and other biomedical treatment, *n* (%)	
Patients received 24-h antipsychotic medication-free period[7]	78 (78.8)
Patients received 2 mg HPDE[8] or less in first 3 weeks of treatment[7]	50 (50.5)
Daily dose HPDE[8] of antipsychotic medication in first 3 weeks: mean (median, range)[7]	2.6 (2.0, 0.5–9.3)
Maximum daily dose HPDE[8] of antipsychotic medication: mean (median, range)[7]	4.7 (4.0, 1–21)
Patients prescribed depot antipsychotic medication[9]	2 (1.8)
Patients prescribed mood stabiliser	30 (26.8)
Patients prescribed antidepressant	19 (17.0)
Patients prescribed benzodiazepines	89 (79.5)
Patients prescribed anticholinergic	10 (8.9)
Patients received ECT	3 (2.7)
Number of ECT sessions: mean (median, range)	8.3 (9.0, 4–12)
Biomedical investigations, *n* (%)	
Patients underwent physical examination	87 (77.7)
Patients underwent haematology investigation	85 (75.9)
Patients underwent urinary drug screening	35 (31.3)
Patients underwent CT or MRI scan	19 (17.0)
Patients received EEG	16 (14.3)

EPPIC, Early Psychosis Prevention and Intervention Centre; HPDE, haloperidol equivalent; ECT, electroconvulsive therapy; CT, computed tomography; MRI, magnetic resonance imaging; EEG, electroencephalogram.

1. Private household refers to family, friend or self. Community-based practitioner refers to a general practitioner, private mental health professional, or community agency. Crisis service refers to a crisis team or triage of another mental health service, or hospital emergency department.
2. Forty-four patients were admitted to EPPIC in-patient unit, 16 patients were admitted to non-EPPIC in-patient unit and 23 patients were admitted to EPPIC and non-EPPIC in-patient units.
3. Based on 83 patients admitted to in-patient care.
4. Based on 55 patients admitted directly to EPPIC in-patient unit and not transferred from another in-patient unit.
5. Based on 67 patients admitted to EPPIC in-patient unit.
6. *n*=99 because 13 patients moved out of EPPIC catchment area and required transfer of care to another service.
7. *n*=99 because 3 patients not commenced on antipsychotic medication, 9 patients already commenced on antipsychotic medication prior to referral to EPPIC, and 1 patient with missing data.
8. The following were deemed equivalent: haloperidol 2 mg, risperidone 2 mg, olanzapine 5 mg, quetiapine 200 mg and chlorpromazine 100 mg.
9. *n*=109 because 3 patients not commenced on antipsychotic medication.

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other services require a more proactive approach that seeks to reduce the necessity for these patients to attend crisis services. Practical steps for consideration include the development of stronger links between the primary care and mental health sectors, and greater capacity for mental health services to provide assertive outreach for assessment and treatment.

The finding that the majority of patients were hospitalised in the period following initial presentation is similar to other studies of first-episode psychosis (Power *et al*, 1998; Sipos *et al*, 2001; Edwards *et al*, 2002). The higher rate of in-patient admission for patients treated at EPPIC in the current study compared with that of Power *et al* (1998) (72 *v.* 63%) may in part be owing to the inclusion of in-patient admissions that occurred immediately prior to referral to EPPIC.

Restrictive practices other than in-patient admission, such as in-patient seclusion, police transport or a CTO, were required for only a relatively small proportion of patients in order to manage risks of self-harm or aggression or to facilitate treatment. The lower rate of seclusion found in the current study compared with that of Power *et al* (1998) (12 *v.* 17%) shows a positive trend in the clinical management of patients with challenging behaviours. The use of in-patient seclusion can be minimised by reinforcing limits of acceptable behaviour while an in-patient, implementing more intensive nursing care, using appropriate medication and behavioural management strategies, and promoting involvement in recreational or other activities. Strategies to minimise police transport include pre-existing cooperative arrangements with police, the use of aggression management techniques, and providing information to patients about their legal rights and expected in-patient and treatment practices. A CTO was probably required for only a small number of patients because of the use of more tolerable treatment options (such as low-dose antipsychotic medications), early contact with family members and regular contact with patients and carers on an out-patient basis to ensure continuity of care.

The results demonstrated a high degree of conformity with recommendations for biomedical treatment for acute first-episode psychosis (McGorry *et al*, 2003). This included an initial observation period without antipsychotic medication, the use of low-dose atypical antipsychotic medications, plus a mood stabiliser or antidepressant medication where indicated, the regular use of benzodiazepines to relieve distress, insomnia and behavioural disturbance, and the use of depot antipsychotic medication in exceptional cases. The mean haloperidol equivalents found in the current study and that of Power *et al* (1998) (4.7 *v.* 4.1 mg/day) indicate that low-dose antipsychotic medication is a consistent feature of treatment at EPPIC.

Some biomedical investigations were not performed as regularly as expected. This may indicate either that the investigations were not requested or that patients did not attend for relevant appointments, or both. Although optimal assessment of illicit drug use includes urinary drug screening, clinicians may not have requested this investigation in cases where a reliable history was obtained regarding the presence of recent illicit substance use. The low rate of a CT or MRI scan may reflect clinicians' expectations of a low probability of detecting a brain abnormality of significant clinical importance (Lubman *et al*, 2002).

The substantial rate of remission of positive symptoms in the first 3 months of treatment is consistent with previous studies (Lieberman *et al*, 1993; Power *et al*, 1998). Significantly more patients would be expected to achieve remission at 1-year follow-up (Lieberman *et al*, 1993; Edwards *et al*, 1998). The higher rate of remission found in the current study compared with that of Power *et al* (1998) (72 *v.* 63%) was probably related to a limitation of the current study that remission data were only available for a subsample of patients. That is, patients with remission data were more likely to be diagnosed with affective psychosis than patients without remission data, and affective psychosis was associated with a higher rate of remission. However, most patients with affective or non-affective psychosis achieved remission at 3-month follow-up, and the findings support the use of low-dose antipsychotic medication as a viable and effective treatment strategy for the initial acute phase of first-episode psychosis.

The current study forms part of an ongoing process of service evaluation at EPPIC that seeks to monitor treatment integrity and to identify areas that require improvement. The findings indicated that treatment was provided largely in accordance with recommendations except for a low rate of completion of some biomedical investigations. A number of initiatives have been implemented to improve routine completion of these investigations since this study was undertaken. Further evaluations are planned to monitor clinical practice in this and other areas to ensure high-quality treatment is provided at EPPIC.

Declaration of interest

None.

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CHRISTOPHER O'LOUGHLIN AND JON DARLEY

Has the referral of older adults with dementia changed since the availability of acetylcholinesterase inhibitors and the NICE guidelines?

AIMS AND METHOD

To investigate whether patients with dementia are referred to specialist services earlier in the disease since the launch of acetylcholinesterase inhibitors and the publication of the National Institute for Clinical Excellence (NICE) guidelines for the use of these drugs. All referrals to old age psychiatry services in two 6-month periods in 1996 and 2003 were surveyed retrospectively for diagnosis, Mini-Mental State Examination (MMSE) score and use of acetylcholinesterase inhibitors.

RESULTS

The mean MMSE score at referral increased from 18.8 to 21.5 (P=0.0005) between 1996 and 2003. Acetylcholinesterase inhibitors were prescribed for 35% of all patients and 58% of patients that would be suitable according to NICE guidelines in the 2003 group.

CLINICAL IMPLICATIONS

The earlier referral of patients with dementia to mental health services is encouraging.

Donepezil was launched in the UK by Pfizer in March 1997 as the first readily available pharmacological treatment to slow the rate of cognitive decline in Alzheimer's disease Donepezil increases the available acetylcholine by inhibition of the enzyme acetylcholinesterase (AChE). This was followed in 1998 by the launch of rivastigmine by Novartis and in 2000 by galantamine from Shire Pharmaceuticals. There is also evidence that these drugs may have some benefit in the cognitive decline associated with cerebrovascular dementia (Malouf & Birks, 2004) and behavioural disturbance in Lewy body dementia (McKeith *et al*, 2000).

About the time of the launch of these drugs there were a number of initiatives designed to improve the care of older adults with mental health problems. These included the *Forget Me Not* reports (Audit Commission, 2000, 2002) and the *National Service Framework for Older People* (Department of Health, 2001). Arguably, however, it was the review of the AChE inhibitors by the National Institute for Clinical Excellence (NICE) in January 2001 that brought a new mood of optimism in the diagnosis and management of dementia (O'Brien & Ballard, 2001). NICE recommended that the three drugs should be available for National Health Service (NHS) patients with mild or moderate Alzheimer's disease, whose Mini-Mental State Examination (MMSE; Folstein *et al*, 1975) score is above 12, with an assessment of effec-

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