Three-year community case management for early psychosis: a randomised controlled study

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KEY MESSAGES

1. Extension of community case management for a third year after onset of psychosis improved functioning.
2. Extending community case management from 2 to 3 years enabled further benefits to negative symptoms, general psychopathology, and depression.

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Introduction

Psychotic disorders are among the 10 highest overall burden diseases. The first few years following illness onset are the critical period for intervention,[1] particularly if carried out by specialised teams with protocol-based, phase-specific case management.

In Hong Kong, the Early Assessment Service for Young People with Early Psychosis (EASY) provides specialised care to first-episode patients for the first 2 years and achieves better outcome.[2,3] Nonetheless, the optimal intervention duration remains unknown.[4] The third year following illness onset is often eventful and within the critical period. This study investigated the effectiveness of an additional year of community-based case management for improving functioning outcome.

Methods

This randomised controlled trial was conducted from July 2010 to June 2012. A total of 160 Cantonese-speaking Chinese patients aged 18 to 35 years with a diagnosis of schizophrenia, non-affective psychosis, affective disorders with psychotic features, or delusional disorder who had received EASY for 2 years were randomised to receive further case management or standard care for 1 year. Both groups continued to receive general psychiatric care with all auxiliary care options unchanged. Patients with organic brain disorder, a history of moderate-to-severe intellectual disability, or drug-induced psychosis were excluded.

Assessments were carried out by trained assessors blinded to the patient's study group. Functioning was measured using the Social and Occupational Functioning Assessment Scale (SOFAS) and Role Functioning Scale (RFS); clinical symptoms were measured using the Positive and Negative Syndrome Scale; and depression was measured using the Calgary Depression Scale for Schizophrenia.

Results

Of the 160 patients recruited, 156 (97.5%) completed the study (79 in case management and 77 in standard care). The two groups were well matched at baseline (Table 1).

By the end of study, the case management group had better functioning, fewer negative symptoms, general psychopathology, and depressive symptoms, and a trend of fewer defaults from psychiatric consultations (Tables 1 and 2).

Using repeated-measures ANOVA, a significant group x time interaction was observed in the SOFAS score, with post-hoc contrast test revealing a significant change from baseline to 6 months ($F(1,154)=4.0$, $P<0.05$) as well as from 6 to 12 months ($F(1,154)=13.8$, $P<0.0001$) (Table 3, Fig). Paired-sample t-tests further demonstrated that the SOFAS and RFS scores in the case management group improved significantly from baseline to 6 months, and from 6 to 12 months (Table 3). Patients in the case management group attained significant functional improvement, whereas those in the standard care group did not.

Discussion

An additional year of community case management provided further benefits in functioning and symptoms for young patients with psychosis. After 2 years of early intervention, both groups of patients still had moderate difficulties in functioning despite clinical remission. Adding a further year of case

TABLE 1. Sociodemographics and outcomes of the two groups*

Variables	Case management (n=79)	Standard care (n=77)	t/χ^2	P value
Age at entry (years)	22.9±3.1	22.8±3.4	-0.3	>0.05
Age at onset (years)	20.0±3.1	20.0±4.1	-0.02	>0.05
Median duration of untreated psychosis (days)	71	112.5	0.5	>0.05†
Male sex	41 (52)	40 (52)	<0.001	>0.05
Single marital status	75 (95)	75 (97)	0.2	>0.05
Education			0.002	>0.05
Secondary	58 (73)	56 (73)		
Tertiary	20 (25)	21 (27)		
Employed	48 (61)	50 (65)	0.2	>0.05
Past psychiatric admission	17 (21.5)	13 (61.9)	0.5	>0.05
Psychiatric diagnosis			6.0	>0.05
Schizophrenia-spectrum disorders	66 (84)	62 (81)		
Other non-affective psychosis	5 (6)	8 (10)		
Affective psychosis	8 (10)	7 (9)		
Positive and Negative Syndrome Scale				
Positive symptom score				
Baseline	9.4±3.3	9.1±2.9	-0.6	>0.05
1 year	8.3±2.5	8.6±2.9	0.7	>0.05
Negative symptom score				
Baseline	11.6±5.1	12.3±5.6	0.8	>0.05
1 year	8.5±2.5	9.9±3.9	2.7	0.009
General psychopathology score				
Baseline	24.5±7.5	24.7±6.2	0.06	>0.05
1 year	19.2±3.7	21.1±5.1	2.6	0.01
Calgary Depression Scale for Schizophrenia				
Baseline	2.8±3.5	2.9±3.5	0.1	>0.05
1 year	0.9±1.6	1.9±2.8	2.8	0.005
Chlorpromazine equivalent dose				
Baseline	179.7±158.7	197.4±160.4	-0.7	>0.05
1 year	162.3±155.8	187.7±158.4	-1.0	>0.05
Use of second-generation antipsychotics				
Baseline	65 (84.4)	64 (83.1)	0.3	>0.05
1 year	63 (81.8)	61 (77.2)	3.1	>0.05
Psychiatric admission	12 (15.2)	8 (10.4)	0.8	>0.05
Default psychiatric follow-up	14 (17.7)	25 (32.5)	3.8	0.05
Relapse	12 (15.2)	15 (19.5)	0.5	>0.05
Suicidal attempt	0 (0)	0 (0)		

* Data are presented as mean±SD or no. (%)
† Mann-Whitney *U* test

TABLE 2. Functioning scores across 1 year between two groups

	Baseline	6 months	12 months
Social and occupational functioning assessment scale			
Case management	57.6±14.4	61.1±13.3	64.8±13.1†
Standard care	57.9±13.7	58.8±11.2	58.0±12.7
Role functioning scale			
Total			
Case management	19.3±4.2	21.0±3.7	22.1±3.2†
Standard care	19.8±4.0	20.7±3.3	20.3±3.7
Work productivity			
Case management	4.1±1.8	4.8±1.6	5.1±1.4*
Standard care	4.6±1.5	4.7±1.4	4.7±1.5
Independent living			
Case management	6.1±1.1	6.3±0.8	6.5±0.6*
Standard care	6.2±0.8	6.5±0.6	6.2±1.0
Immediate social network			
Case management	5.0±1.2	5.3±0.9	5.5±0.9†
Standard care	5.0±1.3	5.0±1.0	5.1±0.9
Extended social network			
Case management	4.1±1.4	4.6±1.2	4.9±1.1†
Standard care	4.0±1.5	4.5±1.3	4.3±1.3

* P<0.05
† P<0.01

TABLE 3. Repeated-measures ANOVA for group x time interactions in functional outcome

Variable	Group x time interactions		
	F	P value	Post-hoc contrast tests*
Social and occupational functioning assessment scale	12.3	<0.0001	T_0–T_6 (P<0.05), T_6–T_{12} (P<0.001)
Role functioning scale			
Total	9.8	<0.0001	T_6–T_{12} (P<0.001)
Work productivity	10.2	<0.0001	T_0–T_6 (P<0.01), T_6–T_{12} (P<0.05)
Independent living	6.5	0.003	T_6–T_{12} (P<0.01)
Immediate social network	5.9	0.007	T_0–T_6 (P<0.05), T_6–T_{12} (P<0.05)
Extended social network	2.7	0.075	

* T_0 denotes baseline, T_6 6-month follow-up, T_{12} 12-month follow-up

management improved functioning to a higher level (general functioning, some meaningful relationships, and employment). Further benefits to negative symptoms, general psychopathology, and depression were also evident, and there was a trend of a lower default rate. Non-compliance with clinic attendance is common in psychiatric patients and a major barrier to the provision of proper care. Patients were better engaged by having a case manager, probably owing to the extra rapport.

This study was limited by an open-label design and a relatively short period of follow-up. Given the nature of case management, double blinding was not feasible, and the current open-label randomised controlled trial design was the most scientifically rigorous method possible to evaluate the efficacy of the intervention. We minimised the potential bias by blinding assessors to the patient group. Longer-term studies are needed to determine whether the beneficial effects can be sustained.

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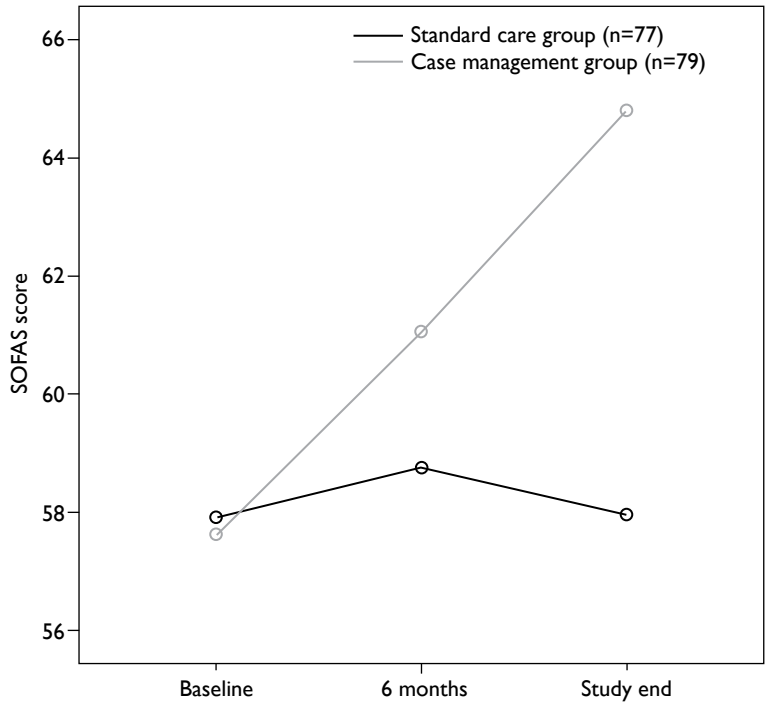

FIG. Changes in Social and Occupational Functioning Assessment Scale (SOFAS) scores from baseline to study end

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