Effect of Enhanced Home and Community Care Services for the elderly on newly diagnosed depressive symptomatology

ORIGINAL ARTICLE

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ABSTRACT

Objectives. To evaluate the prevalence of depressive symptomatology, the role of Enhanced Home and Community Care Services (EHCCS) in identifying new patients with depressive symptomatology and respective clinical outcomes after commencement of drug treatment.

Methods. A retrospective descriptive study was conducted in a regional hospital in Hong Kong between January 2001 and December 2004 inclusive. The sample was comprised of 660 elderly Chinese subjects aged 60 years or older. Subjects were regarded to have newly diagnosed depressive symptoms if they had (1) a new diagnosis of depressive disorder and/or (2) a newly prescribed antidepressant medication for their depressive symptoms. A subgroup of 84 elderly subjects under the Chan Hing EHCCS Team with more comprehensive data recording was further analysed. All outcome measures were counted up to the date 30 June 2005.

Results. Of the 660 patients, 86 (13%) were found to have new-onset depressive symptoms; the majority (n=81) being identified by geriatricians. They had similar baseline sociodemographic characteristics, clinical and functional factors, medical and mental comorbidities as compared to non-depressed subjects. Twelve months prior to their diagnosis, they had significant frequent accident and emergency department visits (≥3/year) [p=0.02] and a trend towards repeated hospitalisations and prolonged hospital stay. With treatment of depression, they experienced no difference in mortality or rate of old-age home admission when compared to the non-depressed subjects.

Conclusions. Depressive symptoms were commonly unrecognised in Chinese home care elderly subjects. The EHCCS was successful and geriatric input was important in identification and treatment of depressive symptoms in this medically and functionally compromised population.

Key words: Depression; Home care services

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INTRODUCTION

Depression is a major public health problem.[1] It is estimated that about 25 to 50% of older adults suffered from depression of different degrees and severity.[2] Depression in the elderly causes

significant impairment in their physical, mental, and social functioning, which is a burden on families and society. It exacerbates their existing medical comorbidities,[3] and results in earlier death and higher use of services,[4-6] and poses considerable risks in terms of morbidity, mortality,[7] institutionalisation, and functional decline, and significantly decreases their quality of life.[8,9] In the elderly, the association of depression with suicide is firmly established.[10] Regrettably, it is often under-diagnosed and under-treated[11] although it stands out as amenable to treatment. The prevalence of depressive symptoms among Chinese aged 70 years or above receiving old-age and disability allowance was 35% according to a local survey.[12]

Home care has grown into an important model of health care, especially for older adults, who represent a significant proportion of the health care recipients. Our government's policy always encouraged older adults to age in place. Enhanced Home and Community Care Services (EHCCS) constitute integrated services from doctors, nurses, and allied health workers dedicated to provide intensive home and community-based care to the frail elderly. The majority of the latter suffer from chronic illness due to a wide range of medical and surgical problems, which lead to moderate levels of disability. They generally need appropriate support by nursing and allied health services to continue living at home. The aim of EHCCS is to enable the elderly people to age at home and support their family caregivers to continue providing effective support. The Services have been implemented since March 2001. Non-government organisations are invited to be the service providers.

The prevalence of depression was between 26 and 44% among those receiving home care.[13,14] A 13.5% rate of major depression was found in a representative sample of older adults receiving home care services[15]; 71% of them were experiencing their first episode of depression, and 78% had had symptoms for more than 2 months. Although EHCCS have been established for more than 4 years, little is known about the prevalence of depressive symptoms among the older home care adults in Hong Kong.

This study therefore aimed to evaluate the prevalence of depressive symptomatology, the role of EHCCS in identifying new patients with depressive symptomatology as well as clinical outcomes after commencement of drug treatment in a local sample of community dwelling elders with moderate disability, receiving home care services.

METHODS

This was a retrospective descriptive study conducted in the Medical Unit of a regional hospital in Hong Kong between 1 January 2001 and 31 December 2004 inclusive. The sample was comprised of 660 elderly Chinese subjects aged 60 years or above, recruited to the EHCCS during the study period. The 15-item Chinese version of the Geriatric Depression Scale had been administered to all patients as part of the comprehensive geriatric assessment. With a cut-off point of ≥8, it has sensitivity of 96.3% and specificity of 87.5%.[12] Subjects were diagnosed to have newly diagnosed depressive symptoms if they had (1) a new diagnosis of depressive disorder according to International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM codes), and/or (2) a newly prescribed antidepressant medication for their depressive symptoms.

A subgroup of 84 elderly subjects under the Chan Hing EHCCS Team with more comprehensive data recording was further analysed. The characteristics of this subgroup including sociodemographic data, medical and mental illnesses, drug history, physical function, cognitive function, life status, registered cause of death, old-age home admission, and health care utilisation were collected (**Table**). All outcome measures including survival and old-age home admission were counted up to 30 June 2005. Follow-up duration and survival time were calculated.

RESULTS

The 660 recruited subjects had a mean (±standard deviation) age of 78.5±7.7 years and 61% were female. One hundred and sixteen EHCCS patients had current or prior depressive symptoms, and 86 were newly diagnosed. The prevalence of newly diagnosed depressive symptomatology was 13%. The majority (n=81, 94%) were diagnosed by EHCCS geriatricians. About half (56%) were referred to psychiatrists for management. One third of the newly diagnosed patients were followed up in psychiatric specialist out-patient clinics.

Among the subgroup of 84 elderly subjects

Table
Characteristics of Chan Hing Enhanced Home and Community Care Services Team patients that were analysed

Sociodemographic
Age, gender, marital status, living situation, housing type, relationship with relatives, presence of informal care, disability allowance
Physical health
Impairment in vision, hearing, swallowing or speech, presence of pressure ulcer or limb contractures
Self-care abilities
Modified Barthel Index
Accessories
Ryle's tube, Foley
Cognitive function
Mini-Mental State Examination, cut-off point of ≤18 Abbreviated Mental Test, cut-off point of ≤5
Major medical illness
Malignant neoplasm, cerebrovascular accident, parkinsonism, hypertension, ischaemic heart disease, heart failure, chronic lung disease, chronic renal disease, chronic liver disease, diabetes mellitus, thyroid disorders, chronic pain and arthritis, chronic constipation, falls, fractures; number of comorbidities
Lifestyle
Smoking, alcohol drinking
Mental illness
Memory impairment, dementia, psychotic or anxiety disorder
Polypharmacy
Number of regular drugs, polypharmacy if >4
Survival
Life status (alive or dead), registered cause of death
Institutionalisation
Old-age home admission
Health care utilisation
Frequency of emergency department visits, frequency and duration of hospitalisations; 12 months prior to Enhanced Home and Community Care Services entry or diagnosis of depressive symptoms

under the Chan Hing EHCCS Team, 21 (25%) were diagnosed to have new-onset depressive symptoms and 56 (67%) were non-depressed. Both groups were similar in terms of age and gender. Patients with newly diagnosed depressive symptoms were similar to those who were not depressed in terms of sociodemographic characteristics, clinical and functional factors, medical and mental comorbidities.

Depressed patients were high users of health care resources 12 months prior to the diagnosis of their depressive symptoms. They had frequent emergency department visits (≥3/year, 38% vs 13%; p=0.02), frequent admissions (≥3/year, 24% vs 14%; p=0.44), and prolonged hospital stays (≥50 days/year, 33% vs 13%; p=0.09).

Five (24%) of the newly diagnosed depressed patients and 22 (39%) non-depressed patients died during the study period. They had similar estimated median survival time (42 vs 48 months; p=0.47 by log rank test) with no significant difference in the principal cause of death.

One quarter (25%) of the Chan Hing EHCCS team patients were institutionalised. Eight of the newly diagnosed were depressed patients and the remaining 13 patients were not depressed. Depressed patients did not have a higher rate of old-age home admission as compared with the non-depressed patients (p=0.31).

DISCUSSION

Depressive symptoms are very common in Chinese elderly patients receiving home care services. These

patients are moderately disabled and qualified to admit to the Care and Attention Home or nursing home. Although seemingly stable, many of them were already followed up by multiple specialties, and some had active and even undiagnosed depressive symptoms. The estimated prevalence of newly diagnosed depressive symptomatology among the whole population of EHCCS patients was 13% (n=86), the majority (n=81, 94%) being diagnosed by EHCCS geriatricians. This highlights the importance of comprehensive geriatric assessment.

Within the EHCCS model, in comparison to non-depressed patients, those with depressive symptoms had similar baseline sociodemographic characteristics, clinical and functional factors, medical and mental comorbidities. However those diagnosed to have new depressive symptoms were more frequent users of health care resources in the prior 12 months. They had more frequent accident and emergency department visits (≥3/year; p=0.02) and exhibited a trend (p>0.05) towards more frequent (≥3/year) and prolonged hospital admissions (≥50 days/year).

With the intensive home and community-based care provided by EHCCS, and early diagnosis and appropriate treatment of depressive symptoms and other comorbidities by geriatricians, depressed patients suffered no difference in survival (p=0.47) and rate of old-age home admissions (p=0.31) compared with non-depressed patients. We concluded that EHCCS had been successful and geriatric input was important in identification and treatment of depressive symptoms in this medically and functionally compromised population. For depressed home care elderly, this model may be useful in reducing mortality and admission to old-aged homes.

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