Determinants of Antidepressant Medication Prescribing in Elderly Residents of Aged Care Homes in Australia: A Retrospective Study

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ABSTRACT

Background: Depression is underrecognized and poorly treated among older people living in aged care homes worldwide. Depression has been associated with higher rates of recurrence, disability, and death in older people.

Objectives: The primary objective of this study was to assess the determinants of antidepressant medication prescribing among older people living in aged care homes in Australia. A further objective was to investigate the antidepressant medications in common use, doses of antidepressants, and concurrent pharmacotherapy among people receiving antidepressants.

Methods: A random sample of 500 deidentified medication review reports was extracted from a database containing >165,000 Residential Medication Management Review reports. Residents' demographic and clinical characteristics, medical diagnoses, and prescribed medications were systematically extracted from these reports. Logistic regression models were used to determine factors associated with the prescribing of any antidepressant, including tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs), and "other" antidepressants (eg, mianserin, mirtazapine, venlafaxine).

Results: The mean (SD) age of the residents was 84.0 (9.0) years. Seventy-five percent were female. The prevalence of antidepressant prescribing among these aged care home residents was 33.0%. SSRIs were more commonly prescribed than TCAs, monoamine oxidase inhibitors, and other antidepressants. Antidepressants were more likely to be prescribed in people treated for dementia with mood disorder (odds ratio [OR] = 9.70; 95% CI, 5.26–17.88), depression (OR = 13.28; 95% CI, 6.44–27.36), and Parkinson's disease (OR = 3.56; 95% CI, 1.37–9.23). SSRI prescribing was associated with dementia with mood disorder (OR = 5.85; 95% CI, 3.19–10.72) and depression (OR = 6.44; 95% CI, 3.38–12.26). TCA prescribing was associated with depression (OR = 2.95; 95% CI, 1.18–7.35) and concurrent benzodiazepine use (OR = 2.43; 95% CI, 1.03-5.72). Other antidepressant prescribing was associated with dementia with mood disorder (OR = 6.53; 95% CI, 3.15–13.50) and depression (OR = 5.00; 95% CI, 2.23–11.19).

Conclusions: There was preferential prescribing of SSRI antidepressants among these older aged care home residents with depression. Cognitive impairment alone was not significantly associated with antidepressant prescribing; however, these aged care home residents with dementia and mood disorders had an increased likelihood of being treated with antidepressants. The prescribing of TCAs was significantly associated with concurrent benzodiazepine use. (Am J Geriatr Pharmacother. 2009;7:210-219) © 2009 Excerpta Medica Inc.

Key words: antidepressant agents, older people, pharmacists, pharmaceutical services, serotonin reuptake inhibitors, tricyclic antidepressants.

INTRODUCTION

The prevalence of depression among residents of nursing homes has been reported to be between 11% and 20%, 1-3 and >35%4,5 have been reported to have clinically significant symptoms of depression. In people with Alzheimer's disease, the prevalence rate of major depression has been reported to be higher (\sim 17%) than that in the general population.⁵ Chronic disease burden,⁶ aging,⁷ and disease-related processes8 have been reported to increase the vulnerability to depression in older people. Depression in older people has been associated with high rates of recurrence, disability, and death.9

Undertreatment^{10,11} and underdetection^{12,13} of depression in geriatric patients has been reported in the literature. Possible reasons include inadequate diagnostic skills, poor recognition of the clinical features of depression in geriatric patients, overlap between symptoms of depression and those of dementia, and preconceptions that depression is a natural part of the aging process.¹⁴ Although epidemiologic studies have suggested that antidepressants may be underutilized for the treatment of depression in geriatric patients, ¹⁰ more research is needed to inform the pharmacologic management of depression in nursing home residents with cognitive impairment.

The evidence to support the efficacy of cognitive behavioral therapy for treating depression in older people is weak, and pharmacotherapy has a primary role. 15 In the past, the pharmacologic management of depression in older people was limited, as the prescribing of tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs) was associated with doserelated unfavorable anticholinergic16 and adverse cardiovascular effects.¹⁷ TCAs prescribed for depression in older people have been associated with a higher rate of adverse effects compared with selective serotonin reuptake inhibitors (SSRIs).¹⁸ One study found that the use of nortriptyline, at a dose as low as 10 mg/d, was effective in the treatment of depression in older people with moderate to severe dementia.¹⁹ However, a meta-analysis found that TCAs compared less favorably with SSRIs with regard to the number of patients withdrawn due to adverse effects (relative risk = 1.36; 95% CI, 1.09-1.70). This has resulted in an increased use of SSRIs as the drug of choice^{20,21} in the management of depression in older people.^{22,23} However, recent concerns have emerged regarding the tolerability of SSRIs in older people. These concerns include the potential for drug-drug interactions, platelet dvsfunction, a risk for falls similar to that with TCAs, hyponatremia, and extrapyramidal disorders. 21,24,25

Characteristics associated with psychotropic drug use among older residents of nursing homes have been well described in the literature.^{26–29} However, previously published studies^{30,31} specifically related to the prescribing of antidepressant treatment are limited. The prescribing of antidepressant treatment in older people requires careful consideration of an individual resident's diagnostic and medication profile. In addition, antidepressants may be indicated for reasons other than depression. Residents' characteristics, medical diagnoses, and behavioral symptoms may contribute to variations in antidepressant prescribing.31,32

Understanding prevalence patterns, antidepressant doses, concurrent use of other drugs with antidepressants, and factors associated with antidepressant medication prescribing can be helpful in optimizing antidepressant drug use in this vulnerable population. The objective of the present study was to assess the factors associated with prescribing of antidepressants in older residents of aged care homes across Sydney, Australia. This study also investigated the antidepressant medications and doses in common use and concurrent drug therapy in older people being treated with antidepressants.

MATERIALS AND METHODS

Approval to undertake this research was obtained from the Human Ethics Committee, University of Sydney, Svdney, Australia.

Data Source

Data were obtained from a database containing >165,000 Residential Medication Management Review (RMMR) reports. An RMMR report is a service provided to permanent residents of Australian governmentfunded aged care homes by a pharmacist in collaboration with a general medical practitioner.^{33,34} Aged care homes in Australia provide 2 levels of residential carehigh and low-often referred to as nursing homes and hostels, respectively. High-level residential care is provided to older people who have been determined by an aged care assessment team (ACAT) to require nearcomplete nursing assistance with all activities of daily living. Low-level residential care is provided to people who have been determined by an ACAT to have the capacity for self-care but who may benefit from supportive services, companionship, and nursing care if required. To obtain a representative sample of residents receiving high- and low-level care from aged care homes across Sydney, we included a random sample from 62 aged care homes. Twenty-eight of the homes

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