

SERTRALINE IN THE TREATMENT OF MINOR DEPRESSION IN NURSING HOME RESIDENTS: A PILOT STUDY

JULES ROSEN*, BENOIT H. MULSANT AND BRUCE G. POLLOCK

Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine, Pittsburgh, USA

ABSTRACT

'Minor' depression affects up to 50% of residents in long-term care facilities and is associated with considerable discomfort, disability and risk of morbidity. Despite the prevalence of this problem, few studies addressing the treatment of these patients have been conducted. In an open clinical trial, 12 nursing home residents who met the DSM-IV description for minor depressive disorder were treated with sertraline for 6 weeks. Adverse effects and clinical response were monitored. All residents tolerated their medication without any significant side-effects. At the completion of the study, the Hamilton Depression Rating Scale and Global Assessment Scale change scores both indicated significant improvement and 75% of the residents met criteria for 'remission'. This preliminary study provides evidence that nursing home residents with minor depression tolerated treatment with sertraline and improved clinically. Copyright © 2000 John Wiley & Sons, Ltd.

KEY WORDS—minor depression; treatment; nursing homes; sertraline

Approximately 30–50% of nursing home residents are reported to be depressed, with 15% meeting criteria for a current major depressive episode and the remainder experiencing significant depressive symptoms (Kim and Rovner, 1995). Most of these residents would fall into the category of 'minor depression' (MD). MD, as proposed in the DSM-IV (American Psychiatric Association, 1994), requires sad mood or loss of interest and at least two additional symptoms of depression.

With approximately 1.5 million Americans living in nursing homes, an estimated half a million people are experiencing MD. Despite the prevalence of this problem, MD in long-term care has received little attention. In a longitudinal study of nursing home depression, Parmelee *et al.* (1992) reported that residents with MD were at increased risk of major depression 1 year later. A recent study of medically ill elders found that patients with major or minor depression resemble each other

more than they do patients without depression (Koenig, 1997). Furthermore, persons with MD are at increased risk for social disability and increased health services use (Koenig and Blazer, 1998; Jaffee *et al.*, 1994; Wells *et al.*, 1998; American Academy of Family Physicians, 1992).

If, indeed, major and minor depressions are part of a continuum, an interesting hypothesis is that antidepressant treatment of MD in long-term care would reduce the associated distress and disability and might actually prevent a subsequent major depressive episode. There is inconsistent evidence supporting a beneficial response to medications in the general population with MD (Howland, 1991; Stewart *et al.*, 1992; Hellerstein *et al.*, 1993); however, there are no published reports of pharmacotherapy of MD in nursing home residents.

Prior to initiating a double-blind, placebo-controlled study of pharmacotherapy of MD in nursing home residents, we wanted to assess the safety and tolerability of an antidepressant trial in this frail and vulnerable population. Thus, we conducted an open-label trial of the SSRI sertraline in nursing home residents with MD. This pilot study focused on safety and tolerability; however, as a secondary outcome measure, the clinical efficacy of sertraline in these residents is described.

*Correspondence to: Dr J. Rosen, Western Psychiatric Institute and Clinic, 3811 O'Hara St, Pittsburgh, PA 15241, USA.

Contract grant sponsor: NIMH.
Contract grant no: MH52247.
Contract grant no: MH 01040.
Contract grant no: MH 01509.
Contract grant sponsor: Pfizer Pharmaceuticals, Inc.

METHODS

Twelve residents of the Riverview Center for Jewish Seniors in Pittsburgh, PA who were referred by their primary care physicians for psychiatric evaluation and treatment of depression participated in this study. All met the DSM-IV criteria for 'minor depression', were not currently on other antidepressant or antipsychotic medications and signed informed consent to participate in the study. All participants had resided in the facility for at least 3 months. Although cognitive deficits were present in several of the participants at the time of the initial evaluation, all were judged to be capable of adequately reporting their symptoms and providing interval histories. All participants had significant medical problems that necessitated nursing home placement.

Structured assessments were completed prior to treatment and at weeks 2, 4 and 6 by a single trained rater and clinical evaluations were completed weekly by a geriatric psychiatrist (JR). The assessment battery consisted of the Mini-Mental State Exam (MMSE) (Folstein *et al.*, 1975), the Global Assessment Scale (GAS) (Endicott *et al.*, 1976), the Hamilton Depression Rating Scale (HDRS) (Hamilton, 1960) and the UKU (Lingjaerde *et al.*, 1987). The UKU is a 48-item scale that assesses a wide range of potential medication side-effects on a four-point scale. Following baseline assessment, the residents were started on sertraline, 50 mg/day. After 4 weeks, the psychiatrist, who was blind to the clinical ratings, had the option of increasing the dose to 100 mg/day for the final 2 weeks of this 6-week study.

ANALYSIS

For the purpose of this study, a subscale composed of possible side-effects of SSRIs was constructed from the UKU. It included the following items: nausea, bowel motility (diarrhoea and constipation), weight loss, tremor and dizziness. As none of the residents in this study were sexually active at baseline, this potential side-effect of sertraline is not included in the longitudinal assessment. For each of these UKU items, residents were classified as 'improved' (UKU item score decreased by one point or more), exhibiting 'no change' or being 'minimally worse' (UKU item score increased by one point) or 'worse' (UKU item score increased by two or more).

Table 1. Demographic characteristics of study participants ($N = 12$)

	Mean (SD)	Range
Age	83.2 (7.8)	72–92
Baseline Hamilton	13.4 (3.9)	8–22
Baseline MMSE	19.9 (5.5)	11–29
Baseline GAS	51.9 (7.9)	35–60
Gender	6 M, 6 F	

To assess change in the MMSE, HDRS and GAS over the 6-week period, the non-parametric rank signed test was utilized. Categorical treatment responders were identified as a final Ham D score of < 10 (for those residents whose initial score was > 10) or a decline in the HDRS score by 50%.

RESULTS

The demographic characteristics of these patients are presented in Table 1.

There were no reported adverse events that led to medication discontinuation in any of the subjects. Fig. 1 shows the changes in the side-effect profile between baseline and week 6. Sertraline doses were increased in three residents at week 4. None of these three experienced significant adverse reactions.

The HDRS and GAS scores improved significantly. The mean (\pm SD) HDRS score decrease was 5.9 ± 4.4 ($p < 0.001$) and the mean (\pm SD) GAS score increase was 15.6 ± 7.4 ($p < 0.0005$). Fig. 2 demonstrates the change in HDRS and GAS over the 6-week study period. Eight of the 12 patients met criteria for full remission as defined earlier. The mean (\pm SD) MMSE score remained relatively unchanged during the course of the study, with a mean decline of -0.5 ± 4.3 ($p = 0.92$).

DISCUSSION

This pilot study suggests that sertraline can be safely used in elderly nursing home residents. Even in an open-label trial in which the patients were aware of the medication they were taking and its potential side-effects, the emergence of clinically significant adverse effects was remarkably low.

Currently, there are no published studies addressing the pharmacotherapy of MD in elderly nursing

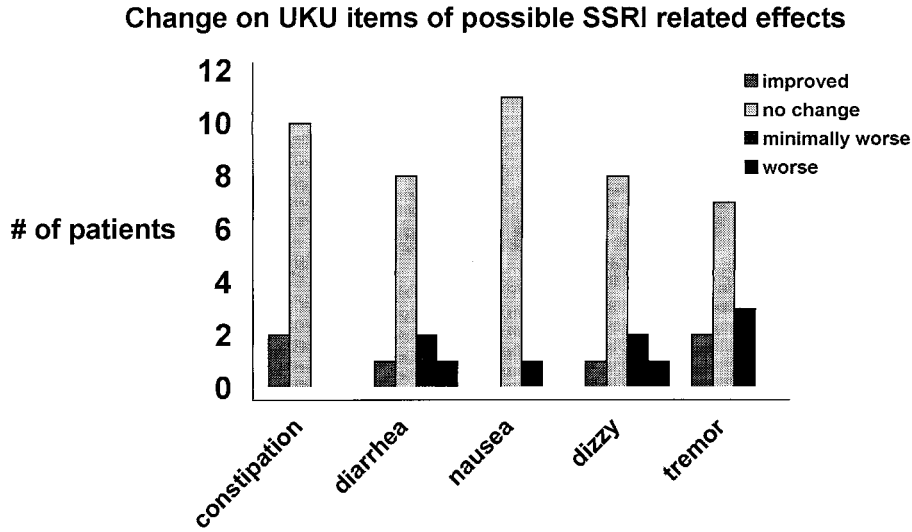


Fig. 1. Change on UKU items of possible SSRI-related effects

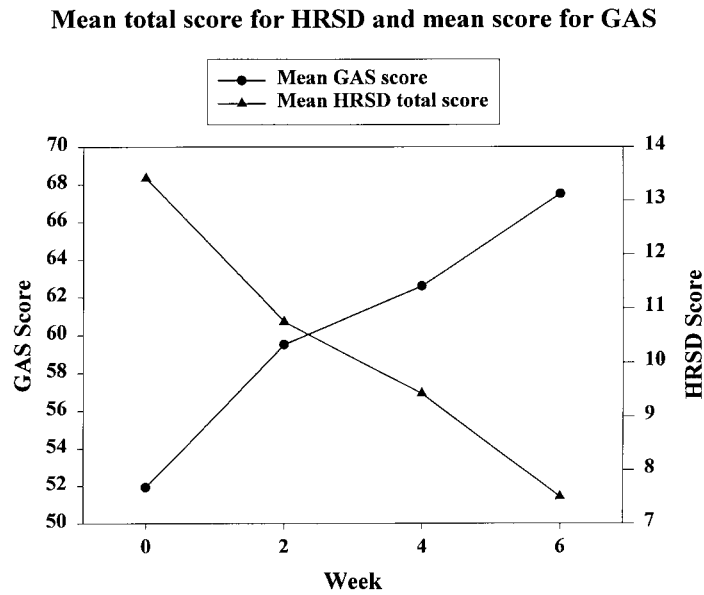


Fig. 2. Mean total score for HRSD and mean score for GAS

home residents. A recent review of nursing home depression states the commonly held belief that MD is best treated non-pharmacologically whereas major depression likely requires pharmacotherapy (Samuels and Katz, 1995). Although recent studies document the beneficial effect of a specific psychosocial intervention in nursing home residents with both major and minor depression, such treatment is costly and not available in most settings (Rosen

et al., 1997). These preliminary data suggest a potential role for judicious pharmacotherapy in the treatment of MD in long-term care.

There is a well-deserved caution regarding the use of psychotropic medications in nursing home residents (Ray, 1992; Ray *et al.*, 1980). A recent study that retrospectively assessed the rate of falls in nursing homes demonstrated that residents receiving antidepressant medications were more

likely to fall compared to residents who were not on antidepressants (Thapa *et al.*, 1998). Surprisingly, residents treated with SSRIs, other 'newer' agents or tricyclic antidepressants were at similar risk of falling. This important study raises more questions that it answers (eg was the risk of falling increased by depression or by antidepressants?). These results should not necessarily be viewed as a negative report on the use of antidepressants. Rather, physical reconditioning and gait evaluation should be included in the treatment plans as residents recover from depression. The high prevalence of MD in long-term care settings with the associated increased disability, health problems and risk of major depression justifies treatment efforts. Controlled studies are needed to clarify the risk/benefit ratio of pharmacotherapy of MD in this population.

In conclusion, we found that a small group of elderly nursing home residents with MD could be safely treated in long-term care settings with the SSRI sertraline. In addition, they showed significant improvement in depressive symptoms (HDRS scores) and global functioning (GAS scores). Further studies conducted under placebo-controlled conditions are needed to prove clinical effectiveness. With the current evidence of a positive response with psychosocial treatment (Rosen *et al.*, 1997), further studies are needed to clarify which residents respond to non-medication interventions, which respond to medications along and which require both.

ACKNOWLEDGEMENTS

The authors acknowledge the contributions of Carol French for data collection and Kai Yu for statistical assistance. This work is supported by NIMH grants MH52247, MH01040, MH01509 and an unrestricted educational grant from Pfizer Pharmaceuticals, Inc.

REFERENCES

- American Academy of Family Physicians (1992) *Services Outcomes of Minor Depression in Primary Care*. American Academy of Family Physicians.
- American Psychiatric Association (1994) *DSM-IV: Diagnostic and Statistical Manual of Mental Health Disorders*. American Psychiatric Association, New York.
- Endicott, J., Spitzer, R. L., Fleiss, J. L. *et al.* (1976) The global assessment scale: a procedure for measuring overall severity of psychiatric disturbance. *Arch. Gen. Psychiat.* **33**, 766–771.
- Folstein, M. F., Folstein, S. E. and McHugh, P. R. (1975) Mini-Mental State: a practical method for grading the cognitive state of patients for the clinician. *J. Psychiatr. Res.* **12**, 189–198.
- Hamilton, M. (1960) A rating scale for depression. *J. Neurol. Neurosurg. Psychiat.* **23**, 56–62.
- Hellerstein, D. J., Yanowitch, P., Rosenthal, J. *et al.* (1993) A randomized, double-blind study of fluoxetine vs. placebo in the treatment of dysthymia. *Am. J. Psychiat.* **150**, 1169–1175.
- Howland, R. H. (1991) Pharmacotherapy of dysthymia: A review. *J. Clin. Psychopharmacol.* **11**, 83–92.
- Jaffee, A. F., Froom, J. and Galambos, N. (1994) Minor depression and functional impairment. *Arch. Fam. Med.* **3**, 1081–1086.
- Kim, E. and Rovner, B. (1995) Epidemiology of psychiatric disturbance in nursing homes. *Psychiatr. Ann.* **25**, 409–412.
- Koenig, H. G. (1997) Differences in psychosocial and health correlates of major and minor depression in medically ill older adults. *J. Am. Geriatr. Soc.* **45**, 1487–1495.
- Koenig, H. G. and Blazer, D. G. (1998) Minor depression in late life. *Am. J. Geriatr. Psychiat.* **4S1**, S14–S21.
- Lingjaerde, O., Ahifors, U. G., Bech, P. *et al.* (1987) The UKU side effect rating scale. *Acta Psychiatr. Scand. Suppl.* **334**, 1–100.
- Parmelee, P. A., Katz, I. R. and Lawton, M. P. (1992) Incidence of depression in long-term care settings. *J. Gerontol.* **47**, M189–M196.
- Ray, W. A. (1992) Psychotropic drugs and injuries among the elderly: a review. *J. Clin. Psychopharmacol.* **12**, 386–396.
- Ray, W. A., Federspiel, C. F. and Schaffner, W. (1980) A study of antipsychotic drug use in nursing homes: epidemiologic evidence suggesting misuse. *Am. J. Pub. Health* **70**, 485–491.
- Rosen, J., Rogers, J. C., Marin, R. S. *et al.* (1997) Control-relevant intervention in the treatment of major and minor depression in a long-term care facility. *Am. J. Geriatr. Psychiat.* **5**, 247–257.
- Samuels, S. C. and Katz, I. B. (1995) Depression in the nursing home. *Psychiatr. Ann.* **25**, 419–424.
- Stewart, J. W., McGrath, P. J. and Quitkin, F. M. (1992) Can mildly depressed outpatients with atypical depression benefit from antidepressants? *Am. J. Psychiat.* **149**, 615–619.
- Thapa, P. B., Gideon, P., Cost, T. W. *et al.* (1998) Antidepressants and the risk of falls among nursing home residents. *N. Engl. J. Med.* **339**, 875–882.
- Wells, K. B., Burnam, M. A., Rogers, W. *et al.* (1998) The course of depression in adult outpatients: results from the medical outcomes study. *Arch. Gen. Psychiat.* **49**, 788–794.