

ORIGINAL ARTICLE

Can selective serotonin inhibitor drugs in elderly patients in nursing homes be reduced?

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Abstract

Objective. To investigate whether treatment with selective serotonin reuptake inhibitors (SSRIs) could be withdrawn for elderly residents who had been on treatment for at least one year and to evaluate a method for systematic drug review. **Design.** Open, prospective, interventional study. **Setting.** Four counties in Sweden. **Subjects.** Elderly residents at 19 nursing homes, with ongoing treatment with SSRIs for more than one year. **Main outcome measures.** Clinical evaluation, registration of drugs used and rating with Montgomery–Åsberg Depression Rating Scale (MADRS). A semi-structured telephone interview with 15 participating physicians and 19 nurses. **Results.** About one-third of all 822 residents in the nursing homes had ongoing antidepressant treatment, predominantly with SSRIs; 75% of them had been treated with SSRIs for at least one year and 119 (60%) of these were considered eligible for the study. The intervention was judged successful in 52% of these residents of whom 88% had a MADRS rating of less than 20 points. The GPs and the nurses experienced the method as practicable. **Conclusions.** Withdrawal of SSRI treatment was successful in the majority of cases. The MADRS may be a valuable addition to clinical evaluation when deciding whether to end or continue SSRI treatment.

Key Words: Family practice, nursing homes, SSRI drugs, systematic drug review, withdrawal

Unnecessary drug treatment and polypharmacy, the prescription and administration of more drugs than are clinically indicated for a given patient, are common among the elderly [1–3] and may lead to undesired effects such as drug interactions, adverse drug reactions, decreased quality of life, increased need for care and cost of care [4–6]. Systematic drug reviews, normally dealing with one patient at a time, ought to be performed regularly in order to decrease unnecessary drug treatment among the elderly, possibly leading to a reduction in the number of items prescribed and to substantial savings for the health service [7].

During the last decade, the utilization of selective serotonin reuptake inhibitors (SSRIs) has increased dramatically among the elderly due to better tolerance compared with the older tricyclic antidepressants [8,9]. In the Swedish guidelines, “Treatment of depression among the elderly” [10],

Unnecessary drug treatment and polypharmacy are common among the elderly in nursing homes.

- Three out of four elderly patients were on treatment with SSRIs for at least one year although two-thirds of them had no obvious indication for long-term treatment.
- Withdrawal of SSRI treatment was successful in the majority of cases.
- A systematic drug review focused on SSRI was experienced as practicable.

the first choice recommendation for the elderly is an SSRI. Depression is common among those above 65 years of age, about 15%, and presence of concomitant disease further increases the prevalence of depression [10,11].

Depression in the elderly may be difficult to diagnose [12] as the signs and symptoms can be difficult to differentiate from symptoms of normal ageing [13]. In addition, the relapse rate is high among elderly patients and in order to diminish that risk it is advised that the treatment is continued for at least one year after improvement. In the Swedish guidelines, two or more depressive periods during the last few years or failure in earlier withdrawals of antidepressants are considered indications for long-term-treatment with antidepressants and concomitant dementia strengthens the indication for long-term treatment. The guidelines also emphasize that SSRI treatment ought to be evaluated regularly and reconsidered, and that prophylactic long-term treatment ought to be considered in many cases [10,11].

The aim of the present study was to investigate whether SSRI treatment could be withdrawn for elderly residents in nursing homes who had been on treatment for at least one year without indications for long-term treatment. In addition we wanted to evaluate a method for systematic drug review in nursing homes.

Material and methods

Setting and healthcare participants

During September–October 2003, GPs at the Health Care Centres in the counties of Jönköping, Kalmar, Kronoberg, and Östergötland, Sweden, were invited to participate in the study. A total of 17 GPs were recruited who together with 28 municipality nurses were responsible for the healthcare of patients at 19 nursing homes of varying size (12–101 residents); 822 residents in total.

Participating elderly residents

Included in the study were residents who had been on treatment with SSRIs for more than one year. Excluded were those who had indications other than depression for treatment (e.g. anxiety, insomnia) or who had an indication for long-term treatment with SSRIs, i.e. present depressive symptoms, at least two episodes of depression during the last two years, or previous unsuccessful attempts to end antidepressant therapy. The GP determined if eligible residents had any indication for long-term treatment. For those without an obvious indication, the resident/close relatives were asked for informed consent to participate in the trial. The study was carried out during the first six months of 2004.

Documentation

In January 2004, the nurses registered all residents with SSRI treatment. Data on age, gender, diagnoses, dementia, the antidepressant used, dosage, and length of the ongoing treatment were recorded. Number of continuously used drugs and number of psychoactive drugs were recorded at inclusion and at follow-up.

A clinical evaluation by the GP, with registration of drugs used and ratings of Montgomery–Åsberg Depression Rating Scale (MADRS) [14] were performed prior to the inclusion and 8–12 weeks after the last SSRI dose. The SSRI treatment was gradually reduced and terminated after 6–8 weeks. The nurses had regular contact with the residents and relatives throughout the study period. We chose the GPs' evaluation and clinical action as outcome criteria. The termination of SSRI treatment was judged to be successful if the resident was feeling well without SSRIs at the follow-up 8–12 weeks after the last SSRI dose. The termination was judged to be a failure if SSRI treatment could not be terminated or if the patient deteriorated and SSRI treatment was renewed before the follow-up.

The reasons for excluding patients fulfilling the inclusion criteria were registered in eight randomly chosen nursing homes.

Method of intervention

This systematic drug review focused on drugs commonly used among elderly patients, one drug at a time, and where adverse drug reactions may occur. The nurse registered all patients taking the chosen drug, data on length of ongoing treatment, indication for treatment, and actual status of the patient and then discussed the patient and the treatment with the doctor.

A semi-structured telephone interview was performed by one nurse and one physician, both with experience in research, 1–2 months after the study was ended with 15 of the 17 participating physicians and with 19 nurses (one from each nursing home). The interview included 16 questions regarding the method, the MADRS, their experience of difficulties in ending the medication, and follow-up-questions concerning the patients who did not succeed in ending the medication.

Statistical analysis

The outcomes with regard to patient age, concomitant dementia, and MADRS score were analysed before entering the trial with a chi-squared test. A

probability level of less than 0.05 was considered statistically significant.

Ethics

The study was approved by the Regional Research Ethics committee, Linköping University, Sweden.

Results

Withdrawal of SSRI therapy

A total of 258 (73% female) of 822 elderly residents had ongoing treatment with an SSRI (72% with citalopram including escitalopram, 15% with sertraline, and 9% with paroxetine) and 200 of these (77.5%) had been on treatment for more than one year. Eighty-one of these were excluded (Table I); 16% since they did not want to participate and 84% since the treatment was judged necessary. Thus 119 of 200 (59.5%) were subject to intervention in the study. There was a majority of females in all subgroups, especially in the older age groups (Table I). Twelve of the included patients, 7 females and 5 males, were lost to follow-up (11 deceased and 1 moved).

The clinical outcome was judged successful for 63 of the 119 residents (52.9%) included in the trial (Table II). Following withdrawal of SSRIs, four residents reduced and two increased (propiomazine and oxazepam at need, respectively) their use of other psychoactive drugs during the study period. Withdrawal of SSRI therapy was more often successful in residents with a low to moderate MADRS score (0–19) prior to the withdrawal, 55/79 (69.6%), in comparison with 6/16 (37.5%) among those with a MADRS score ≥ 20 ($p=0.015$). The success rate was higher among residents with light or no dementia (41/67) compared with patients with dementia (22/52) ($p=0.042$) and among those below the age of 85 compared with those above the age of 85 ($p=0.047$). The nurses could not carry out the MADRS testing in 24 residents (20.2%) due to high age and presence of dementia. Withdrawal

of SSRIs was judged as successful in only two (8.3%) of these residents.

The method

The telephone interviews showed that the nurses and the GPs experienced the method as practicable. Some 33% of the GPs and 47% of the nurses experienced the method as “excellent” while 67% and 27% respectively experienced it as “fairly good”. The positive experience was confirmed by the fact that both the nurses and the GPs were interested in using this method again for other drugs. The nurses who handled the MADRS questionnaire were more sceptical in using it as a practicable tool for evaluation of depression than the GPs (Table III). About one-third of those interviewed reported that they met opposition when trying to end the SSRI treatment. The majority of this opposition emanated from relatives of the residents and not from the staff.

An absolute majority of the doctors (11/15) and the nurses (12/19) considered clinical evaluation to be more important than evaluation with the MADRS questionnaire. According to the 15 GPs interviewed, 2 of 11 patients who deteriorated and had to restart SSRI treatment had a quick recovery and 9 a fairly quick recovery. The nurses could evaluate 15 patients and assessed that 5 had a quick recovery, 8 a fairly quick recovery, and 2 a long recovery.

Discussion

Of all the 822 residents in the nursing homes included in the present study, 258 (73%) had ongoing antidepressant treatment predominantly with SSRIs, 200 of them had been on SSRI treatment for at least one year, and 60% of those were considered eligible for an attempt to end the SSRI treatment. The intervention was judged successful in 70% of the patients with a rating score of less than 20 points on the MADRS. However, in patients with a score of 20 points or more, the result was more often judged as a failure.

Table I. Residents on antidepressants; fulfilling the inclusion criteria; included in study; fulfilling the inclusion criteria but NOT included in the study; and residents lost to follow-up.

	Age-group				Total	
	45–64	65–74	75–84	85+	n	%
Residents on antidepressant therapy	5	19	96	150	270	100
Residents fulfilling the inclusion criteria	3	15	75	107	200	74.1
Residents included in the study	0	9	45	65	119	59.5
Residents fulfilling the inclusion criteria but NOT included in the study	3	6	30	42	81	40.5
Residents lost to follow-up	0	0	1	11	12	10.1

Table II. Clinical evaluation of success, in relation to age, dementia, and MADRS score prior to withdrawal of the SSRI therapy. Dropouts have been classified as failures in the statistical analysis (intention to treat).

Clinical evaluation	Total n	Age		Dementia		MADRS score before		
		<85	≥85	No	Yes	0–19	≥20	No score
Success	63	34	29	41	22	55	6	2
Failure	44	19	25	22	22	21	9	14
Dropouts	12	1	11	4	8	3	1	8
Total	119	54	65	67	52	79	16	24

It may be argued that the material in this study is biased as the participation was not randomized but based on voluntary participation by the GPs and the nurses. The nursing homes included in this study had in general less treatment with SSRI drugs compared with similar groups in other studies and eight of the nursing homes had performed a systematic drug review with assistance from a pharmacist within the last two years. Thus, the results presented might instead be an underestimation of the potential for positive results as the residents included may represent a more severe group than in most nursing homes. The withdrawal of SSRIs was not blinded and in the absence of robust objective outcome measures we chose the GPs' evaluation and clinical action as outcome criteria. Consequently, the outcome for identical patients might vary between different GPs and nurses. In addition, the voluntary participation of the GPs and nurses enrolled in the study may have influenced the results of the interviews in a positive direction. However, the purpose of the method used was to minimize the work and time consumption for the GPs involved, which may be even more important if the GP is less interested in this field.

The doctors and nurses enrolled in the study experienced that the clinical evaluation was more decisive for the outcome than the MADRS rating.

This may depend on the fact that MADRS is less suitable for elderly patients and patients with dementia. The Cornell Scale for Depression in Dementia (CSDD) might be a better alternative for this group of patients [15]. We chose to use MADRS in this study because it is simple, widely used, and validated as a research instrument in older depressed community residents [16]. The study also showed that withdrawal of SSRI was more successful for patients below the age of 85 compared with those above the age of 85 years and for patients without dementia compared with patients with dementia. Although high age and presence of dementia can be confounding, the study results remained robust also when they were analysed within each sub-group with regard to age and presence of dementia.

There are few studies examining withdrawal of drug treatment in patients with depression above the age of 80. One Swedish study at 11 nursing homes in Stockholm, with patients on long-term treatment with antidepressants, where the indication for treatment was absent, concluded that the treatment could be removed without any harm [17]. However, the validity and the conclusion of that study have been criticized [18]. In this study, patients where withdrawal of SSRI failed recovered

Table III. Results from the interviews with doctors and nurses regarding the systematic drug review. The answers “yes, definitely” and “yes, probably” were assessed as positive. The answers “doubtful”, “probably not”, and “absolutely not” were assessed as negative.

	Positive				Negative			
	Doctor		Nurse		Doctor		Nurse	
	n	%	n	%	n	%	n	%
Did you experience the depression scale (MADRS) as a useful tool?	10	67	5	27	5	34	14	73
Would you consider using this method for other groups of medicines? ¹	14	93	17	94	1	7	1	6
Did you meet with resistance from the staff when removing the SSRI therapy?	6	40	5	27	9	60	14	74
Did you meet with resistance from relatives when removing the SSRI therapy?	9	60	12	63	6	40	7	37

¹One nurse missing.

in a short or moderate time after SSRI was reintroduced.

Studies have shown that unnecessary drug treatment and polypharmacy are common among the elderly in nursing homes. In Bergen, Norway, three out of four nursing home residents had clinically relevant medication problems, most of which were accounted for by psychoactive drugs [19]. More than 80% of the elderly residing in nursing homes in the county of Jönköping had at least one psychoactive drug in 2002 and 44% of them were treated with antidepressants [20]. It may be argued that it may be deleterious for frail elderly individuals to be subject to an intervention to end a therapy that they may have found helpful. Although the treatment with SSRIs is regarded as safer compared with the tricyclic antidepressants, SSRIs are not free from adverse drug reactions (ADRs). There is an increased risk of ADRs as abnormal bleeding, especially in combination with non-steroidal anti-inflammatory drugs (NSAIDs) [4], gastrointestinal haemorrhage [5,6,21] urinary incontinence [22], falls and hip fractures [23], and hyponatremia [24,25].

Conclusion

There is a need for prompt and simple methods to perform systematic drug reviews in nursing homes. In this study, withdrawal of SSRI treatment in patients who had been on treatment for more than one year, and who had no indication for long-term treatment, was successful in the majority of the cases. The MADRS may be a valuable addition to the clinical evaluation when deciding whether to end or continue SSRI treatment. The method used in this study was experienced as practicable.

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