

Dealing with behavioral and psychological symptoms of dementia: a general overview

Majda Azermai

Heymans Institute of Pharmacology,
Ghent University, Ghent, Belgium

Abstract: Dealing with the behavioral and psychological symptoms of dementia (BPSD) is often complex. Given the controversy with regard to antipsychotics for behavioral problems in people with dementia, there has been a renewed emphasis on nonpharmacological interventions, with progress in the design of the relevant studies. Potential nonpharmacological interventions for BPSD are: cognitive training/stimulation, rehabilitative care, activities of daily living, music therapy, massage/touch, physical activity, education/training of professionals, and education and psychosocial support of informal caregivers. Use of antipsychotics in the management of BPSD is controversial due to limited efficacy and the risk of serious adverse effects, but credible alternatives remain scarce. The problem of chronic use of antipsychotics in nursing homes should be tackled. Discontinuation of antipsychotic medication in older individuals with BPSD appears to be feasible. Discontinuation efforts are needed to differentiate between patients for whom antipsychotics have no added value and patients for whom the benefits outweigh the risks.

Keywords: behavioral symptoms, psychological symptoms, dementia, interventions, nonpharmacological intervention

Introduction

As our population grows older, one of the most common chronic mental health conditions is dementia. By 2020, it is estimated that there will be 35 million cases worldwide.¹ Dementia, with Alzheimer's disease as the most common cause, is a progressive illness affecting cognitive functions. The cognitive impairment is often accompanied by behavioral and psychological symptoms of dementia (BPSD). These symptoms tend not to occur in isolation, and are likely to be present in clusters that can vary by time, severity, and diagnosis. There is a certain degree of concordance in the groups of BPSD, resulting in four syndromes: hyperactivity cluster (agitation, aggression, euphoria, disinhibition, irritability, aberrant motor activity), psychosis cluster (hallucinations and delusions), mood liability cluster (depression and anxiety), and instinctual cluster (appetite disturbance, sleep disturbance, and apathy).² It is estimated that almost all older individuals with dementia will develop BPSD at some point during progression of their illness.³ The behavioral problems rather than the cognitive problems are important contributing factors for caregiver burden and institutionalization.⁴ Management of BPSD is very complex for families and health care professionals. Use of antipsychotics for the management of BPSD is controversial due to limited efficacy and the risk of serious adverse effects, but credible alternatives remain scarce. In this paper, we provide a general overview of the nonpharmacological

Correspondence: Majda Azermai
Heymans Institute of Pharmacology,
Ghent University, De Pintelaan 185,
1 Building B, 9000 Ghent, Belgium
Email majda.azermai@ugent.be

treatment options and associated difficulties, and discuss the controversy with regard to antipsychotics.

Nonpharmacological treatment options

Dementia guidelines recommend use of nonpharmacological interventions as first-line treatment options.⁵ Individual interventions are generally not supported by the majority of guidelines, and the recommendations in the guidelines acknowledge the low quality of supporting evidence. Overall, there is an insufficient level of agreement between the guidelines regarding specific nonpharmacological options, rendering decision-making on nonpharmacological interventions extremely difficult. Possible nonpharmacological options traditionally suggested by the guidelines include aromatherapy, multisensory stimulation, therapeutic use of music, animal-assisted therapy, and massage, but often come with the recommendation that more research is needed. However, since 2005, there has been intense debate on the risks/benefits of antipsychotics in BPSD, which has resulted in a renewed emphasis on nonpharmacological treatment options. In a report from the Belgian Health Care Knowledge Center,⁶ nonpharmacological options for the management of dementia were thoroughly reviewed. This resulted in a systematic review including: cognitive training/stimulation, rehabilitative care, activities of daily living (ADL), music therapy, massage/touch, physical activity, education/training of professionals, and education and psychosocial support of informal caregivers.

The methodological quality of selected randomized controlled trials was rated using the appropriate Scottish Intercollegiate Guidelines Network tools. The risk of bias in the included randomized controlled trials was assessed by three independent reviewers based on well-defined criteria. The quality of the evidence was rated according to the Grading of Recommendations Assessment, Development, and Evaluation system. More information on the methodology used in this systematic review can be found in Kroes et al.⁶

Overall, most of the nonpharmacological interventions were promising, but more research is still needed. For reality orientation, there was a lack of high-quality studies and a low level of evidence for this intervention. For cognitive stimulation/training, there was moderate quality of evidence, with a mild to moderate effect on specific outcomes, such as cognitive function, ADL, behavior, and mood. For reminiscence therapy, the studies included in the systematic review showed positive results on cognition, behavior,

and ADL. However, due to weak supporting evidence and conflicting results, this therapy is not recommended. For validation therapy, the majority of studies showed no significant difference between groups with regard to behavioral outcome measures. For aromatherapy, reviews found some positive albeit insignificant effects for reduction of agitation in dementia. There was poor supporting evidence and conflicting results for massage and music therapy, resulting in insufficient evidence to make a recommendation. For light therapy, there was no evidence of effectiveness with regard to cognition, sleep, function, or behavior associated with dementia. Finally, exercise programs for people with dementia were found to have a positive effect on functional ability, physical functioning, and mood in the included studies.

A Cochrane review by Richter et al⁷ concluded that psychosocial interventions defined as “programs that consist of different nonpharmacological components” led to a reduction in use of antipsychotic medication, but that the overall magnitude of the effects remained unclear. Use of “person-centered care”, which can be learned by the use of education and staff support, is becoming more common in residential care. Several studies have investigated “person-centered care training” and suggest some positive results, such as a reduction in antipsychotic use and improvement in symptoms of agitation.^{8,9} In the UK, improving Well-being and Health for People with Dementia (WHELD) is a national priority. The WHELD¹⁰ trial is ongoing and combines the most effective nonpharmacological approaches to develop staff training education. The focus of the promising WHELD trial is “person-centered care training” combined with social intervention, exercise, and formal antipsychotic review.

Pharmacological treatment: a focus on antipsychotics

Since the introduction of chlorpromazine in the 1950s, antipsychotics have been increasingly used globally to manage BPSD. The prevalence of antipsychotic use is high, especially in European nursing homes, ranging from 19% to 46%.^{11–13} The efficacy and effectiveness of atypical antipsychotics has been investigated in several studies,^{14–18} all suggesting modest limited efficacy for some specific symptoms within the BPSD spectrum. Since 2005, a lot of papers have been published on the risks of antipsychotics in elderly patients with dementia, with inconsistent conclusions.

A first official warning was issued in 2005 by the US Food and Drug Administration (FDA)¹⁹ regarding the increased mortality risk associated with use of antipsychotics in older

people with dementia. This warning was based on the results of a pooled analysis²⁰ of 17 randomized controlled trials, which reported a 1.7 times increased risk of mortality with atypical antipsychotic use in older adults with dementia when compared with placebo. In 2008, the FDA extended this warning to all antipsychotics.²¹ Other adverse effects, such as stroke, falls and consequent fractures, cognitive decline, and deep vein thrombosis,^{22,23} have been reported in association with the use of antipsychotics in older persons, even in short-term trials (up to 12 weeks), while antipsychotics are used for far longer in clinical practice.²⁴ Therefore, serious concerns exist with regard to the long-term effects of these agents. In 2009 in the UK, Banerjee²² concluded that there was minimal evidence for improvement in global behavioral disturbance using antipsychotics (effect size 0.1–0.2), but a significant increase in absolute mortality risk. In the same year, Kleijer et al²⁵ reported that only 18% of patients with dementia started on antipsychotics showed improvement in their behavior, while 49% deteriorated. The potential for benefit is overshadowed by the potential for harm, making the use of antipsychotics controversial for older people with dementia.

More recently, there have been updates regarding the off-label use of atypical antipsychotics for elderly patients with dementia, such as the comparative effectiveness reviews issued by the Agency for Healthcare Research and Quality in the USA.²⁶ It was concluded that there were small but statistically significant benefits using aripiprazole, olanzapine, and risperidone in the treatment of BPSD. Adverse events were common, and included death, stroke, and extrapyramidal and urinary symptoms. Although the use of antipsychotics in BPSD is off-label, antipsychotics are still the best pharmacological short-term treatment option for severe persistent symptoms of dementia-related aggression/agitation.

The advice in the guidelines⁵ is to minimize antipsychotic use in older people with dementia, to initiate antipsychotics only in patients with severe distress after a risk-benefit analysis, and to limit the dose and treatment duration, with attempts at discontinuation.

However, strong barriers to discontinuing antipsychotics exist in clinical practice. In our own study,²⁷ we found that 13.8% and 12.2% of nurses and general practitioners, respectively, showed a willingness to discontinue antipsychotics in a small proportion of chronic users (nursing home residents), with a shared willingness in only 4.2%. Residents in whom there was a greater willingness to attempt discontinuation of antipsychotic medication were generally older (mean age 84.6 versus 80.3 years, $P=0.07$), were more

physically dependent (ADL >14, 93.3% versus 60.9%, $P=0.01$), and were resident in a ward with controlled access (80.0% versus 45.7%, $P=0.02$). In contrast, residents for whom there was significantly less willingness to discontinue antipsychotic medication already had a previously failed discontinuation effort and were at risk of causing harm to themselves or to others. Nurses working longer on the ward with lower education had higher barriers to discontinuation of antipsychotics.

Discussion

Dealing with BPSD is complex. Despite limited consensus on efficacy, evidence-based guidelines recommend nonpharmacological options first, and after a proven lack of efficacy, pharmacological treatment may be considered. Given the controversy with regard to antipsychotics for behavioral problems in people with dementia, there is a renewed emphasis on nonpharmacological interventions with progress in the design of relevant studies. Use of “person-centered care” is becoming more common in residential homes, with some positive results in reducing antipsychotic medication and symptoms of agitation. However, the effects on quality of life remain unclear. Also, in the WHELD trial, person-centered care training remained the focus, but it is combined with social intervention, exercise, and formal antipsychotic review. In the WHELD trial, health professionals developed the specific skills needed to offer quality of care to people with dementia. In this way, they developed a comprehensive staff training intervention, aiming to improve the quality of life for people with dementia living in care homes.

Other potential nonpharmacological interventions for BPSD include cognitive training/stimulation, rehabilitative care, music therapy, massage/touch, physical activity, and education/training for professionals, and education and psychosocial support for informal caregivers. The common belief that nonpharmacological interventions can be equally effective across the severity levels of dementia might be erroneous, since some studies have reported that older persons with advanced dementia respond differently to such interventions.²⁸ Pharmacological treatment with antipsychotics often remains the first-line treatment when dealing with BPSD.

There is agreement among the guidelines regarding the use of risperidone, olanzapine, and haloperidol, with claims for efficacy supported by high-quality studies. When looking closer into the primary evidence for the efficacy of antipsychotics in BPSD, there is modest efficacy for haloperidol in terms of aggression.²⁹ With regard to the atypical antipsychotics (the best researched

being risperidone and olanzapine), there is modest efficacy for aggression and psychosis, but the evidence with regard to efficacy for other BPSD symptoms is not convincing.¹⁵ Although the use of antipsychotics for BPSD is off-label, antipsychotics are still the best short-term pharmacological option for severe and persistent symptoms of dementia-related aggression/agitation.

Chronic use of antipsychotics, especially in nursing home residents, should be discouraged. Abrupt discontinuation of antipsychotics in older individuals with BPSD appears to be feasible. Discontinuation efforts are needed to differentiate between patients for whom antipsychotics have no added value and patients for whom the benefits outweigh the risks.

Disclosure

The author reports no conflicts of interest in this work.

References

- Prince M, Jackson J, editors. World Alzheimer Report. London, UK: Alzheimer Disease International; 2009. Available from: <http://www.alz.co.uk/research/files/WorldAlzheimerReport.pdf>. Accessed October 27, 2014.
- Petrovic M, Hurt C, Collins D, et al. Clustering of behavioural and psychological symptoms in dementia (BPSD): a European Alzheimer's Disease Consortium (EADC) study. *Acta Clin Belg*. 2007;62:426–432.
- Lyketsos CG, Steinberg M, Tschanz JT, Norton MC, Steffens DC, Breitner JC. Mental and behavioral disturbances in dementia: findings from the Cache County Study on Memory in Aging. *Am J Psychiatry*. 2000;157:708–714.
- Aguero-Torres H, Von Strauss E, Viitanen M, Winblad B, Fratiglioni L. Institutionalization in the elderly: the role of chronic diseases and dementia. Cross-sectional and longitudinal data from a population-based study. *J Clin Epidemiol*. 2001;54:795–801.
- Azermai M, Petrovic M, Elseviers MM, Bourgeois J, Van Bortel LM, Vander Stichele RH. Systematic appraisal of dementia guidelines on the management of behavioural and psychological symptoms. *Ageing Res Rev*. 2012;11:78–86.
- Kroes M, Garcia-Stewart S, Allen F, Eyssen M, Paulus D. Dementie: welke niet-pharmacologische interventies? Good Clinical Practice. Brussels, Belgium: Federaal Kenniscentrum voor de Gezondheidszorg. 2011. *KCE Reports* 160A. Available from: http://kce.fgov.be/sites/default/files/page_documents/kce_160a_dementie.pdf. Accessed February 23, 2015. Dutch.
- Richter T, Meyer G, Mohler R, Kopke S. Psychosocial interventions for reducing antipsychotic medication in care home residents. *Cochrane Database Syst Rev*. 2012;12:CD008634.
- Fossey J, Masson S, Stafford J, Lawrence V, Corbett A, Ballard C. The disconnect between evidence and practice: a systematic review of person-centred interventions and training manuals for care home staff working with people with dementia. *Int J Geriatr Psychiatry*. 2014;29:797–807.
- Testad I, Corbett A, Aarsland D, et al. The value of personalized psychosocial interventions to address behavioral and psychological symptoms in people with dementia living in care home settings: a systematic review. *Int Psychogeriatrics*. 2014;24:1–16.
- Whitaker R, Fossey J, Ballard C, et al. Improving Well-being and Health for People with Dementia (WHELD): study protocol for a randomised controlled trial. *Trials*. 2014;15:284.
- Rolland Y, Andrieu S, Crochard A, Goni S, Hein C, Vellas B. Psychotropic drug consumption at admission and discharge of nursing home residents. *J Am Med Dir Assoc*. 2012;13:407. e7–e12.
- Kamble P, Chen H, Sherer JT, Aparasu RR. Use of antipsychotics among elderly nursing home residents with dementia in the US: an analysis of National Survey Data. *Drugs Aging*. 2009;26:483–492.
- Mann E, Kopke S, Haastert B, Pitkala K, Meyer G. Psychotropic medication use among nursing home residents in Austria: a cross-sectional study. *BMC Geriatr*. 2009;9:18.
- Schneider LS, Dagerman K, Insel PS. Efficacy and adverse effects of atypical antipsychotics for dementia: meta-analysis of randomized, placebo-controlled trials. *Am J Geriatr Psychiatry*. 2006;14:191–210.
- Ballard C, Waite J. The effectiveness of atypical antipsychotics for the treatment of aggression and psychosis in Alzheimer's disease. *Cochrane Database Syst Rev*. 2006;1:CD003476.
- Schneider LS, Tariot PN, Dagerman KS, et al. Effectiveness of atypical antipsychotic drugs in patients with Alzheimer's disease. *N Engl J Med*. 2006;355:1525–1538.
- Yury CA, Fisher JE. Meta-analysis of the effectiveness of atypical antipsychotics for the treatment of behavioural problems in persons with dementia. *Psychother Psychosom*. 2007;76:213–218.
- Sultzer DL, Davis SM, Tariot PN, et al. Clinical symptom responses to atypical antipsychotic medications in Alzheimer's disease: phase 1 outcomes from the CATIE-AD effectiveness trial. *Am J Psychiatry*. 2008;165:844–854.
- US Food and Drug Administration Public Health Advisory. Public Health Advisory: deaths with antipsychotics in elderly patients with behavioral disturbances. 2005. Available from: <http://www.fda.gov/drugs/drugsafety/postmarketdrugsafetyinformationforpatientsandproviders/ucm053171>. Accessed February 16, 2015.
- Schneider LS, Dagerman KS, Insel P. Risk of death with atypical antipsychotic drug treatment for dementia: meta-analysis of randomized placebo-controlled trials. *JAMA*. 2005;294:1934–1943.
- US Food and Drug Administration Public Health Advisory. Antipsychotics are not indicated for the treatment of dementia-related psychosis. 2008. Available from: <http://www.fda.gov/drugs/drugsafety/postmarketdrugsafetyinformationforpatientsandproviders/ucm124830.htm>. Accessed October 26, 2012.
- Banerjee S. Department of Health. The use of antipsychotic medication for people with dementia: time for action. A report for the Minister of State for Care Services. 2009. Available from: <http://psychrights.org/research/Digest/NLPs/BanerjeeReportOnGeriatricNeurolepticUse.pdf>. Accessed October 26, 2012.
- Liperoti R, Onder G, Landi F, et al. All-cause mortality associated with atypical and conventional antipsychotics among nursing home residents with dementia: a retrospective cohort study. *J Clin Psychiatry*. 2009;70:13.
- Azermai M, Elseviers M, Petrovic M, van Bortel L, Stichele RV. Assessment of antipsychotic prescribing in Belgian nursing homes. *Int Psychogeriatr*. 2011;23:1–9.
- Kleijer BC, van Marum RJ, Egberts AC, et al. The course of behavioral problems in elderly nursing home patients with dementia when treated with antipsychotics. *Int Psychogeriatr*. 2009;21:931–940.
- Agency for Healthcare Research and Quality. Off-label use of atypical antipsychotics: an update. No 43. Rockville, MD, USA: Comparative Effectiveness Reviews; 2011. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK66081/>. Accessed October 26, 2014.
- Azermai M, Vander Stichele RH, Van Bortel L, Elseviers M. Barriers to antipsychotic discontinuation in nursing homes: an exploratory study. *Ageing Ment Health*. 2014;18:346–353.
- Kverno KS, Black BS, Nolan MT, Rabins PV. Research on treating neuropsychiatric symptoms of advanced dementia with non-pharmacological strategies, 1998–2008: a systematic literature review. *Int Psychogeriatr*. 2009;21:825–843.
- Loneragan E, Luxenberg J, Colford J. Haloperidol for agitation in dementia. *Cochrane Database Syst Rev*. 2002;2:CD002852.

Psychology Research and Behavior Management

Dovepress

Publish your work in this journal

Psychology Research and Behavior Management is an international, peer-reviewed, open access journal focusing on the science of psychology and its application in behavior management to develop improved outcomes in the clinical, educational, sports and business arenas. Specific topics covered include: Neuroscience, memory & decision making; Behavior

modification & management; Clinical applications; Business & sports performance management; Social and developmental studies; Animal studies. The manuscript management system is completely online and includes a quick and fair peer-review system. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <http://www.dovepress.com/psychology-research-and-behavior-management-journal>