

Antipsychotics for agitation in dementia

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Clinical question

What are the benefits and harms of antipsychotics for agitation in dementia?

Bottom line

Antipsychotics provide little improvement over placebo on agitation scales. However, a 50% improvement in behaviour occurs in about 46% of those taking antipsychotics versus about 33% taking placebo. Harms are serious (eg, 1 increased death in 80 over 3 months) and common. Antipsychotics should be reserved for severe aggression, and withdrawal should be attempted as soon as possible.

Evidence

Evidence includes 6 systematic reviews (5 to 16 RCTs of 856 to 5110 patients that lasted 10 to 12 weeks).¹⁻⁶ Results are statistically significant unless indicated otherwise.


- Placebo had large effects (eg, 11-point increase on a 144-point scale—a clinically meaningful difference).⁷
- Studies of atypical antipsychotics revealed the following:
 - Mean improvement on multiple scales was trivial (eg, 3 on a 144-point scale [not likely clinically meaningful]).¹⁻³
 - Individual antipsychotics had generally similar results.^{2,5}
 - Some patients attained 50% improvement on scales (eg, 46% with risperidone vs 33% with placebo, number needed to treat [NNT]=8).⁴
 - Harms included stopping owing to adverse events (number needed to harm [NNH]=13 to 39).² Serious harms included death (NNH=77 to 84)^{1,4} and cerebrovascular events (NNH=48 to 104).^{1,2,4}
 - Mini-Mental State Examination score was 0.73 points worse (statistically, not clinically, significant).⁴
 - Other harms were somnolence (NNH=7 to 11), gait abnormalities (NNH=11 to 20), extrapyramidal symptoms (NNH=16 to 44), and peripheral edema (NNH=20 to 25).^{1,2,4}
- First-generation antipsychotics (eg, haloperidol) appear to have similar rates of harms but inconsistent benefits.⁶

Context

- Cholinesterase inhibitors, selective serotonin reuptake inhibitors, trazodone, and valproate provide no meaningful improvement in agitation.⁸⁻¹¹
- Benzodiazepines might approach antipsychotics in efficacy for agitation but also have harms.¹²

- Stopping antipsychotics might reduce death (NNT=4 at 2 years) with little effect on neuropsychiatric symptoms.¹³

Implementation

Medical, psychological, and environmental triggers should be assessed and targeted in patients with agitation.¹⁴ Pain is a common cause of agitation in dementia, occurring in 57% of patients, and pain resolution can improve agitation.¹⁵ A 3 Rs approach (repeat, reassure, redirect) is recommended.¹⁴ In severe aggression that threatens the safety of the patient or others, use atypical antipsychotics to target symptoms without sedating the patient.¹⁶ The lowest effective dose should be used for the shortest time. A deprescribing algorithm is available.¹⁶ 

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Competing interests
None declared

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References

1. Ma H, Huang Y, Cong Z, Wang Y, Jiang W, Gao S, et al. The efficacy and safety of atypical antipsychotics for the treatment of dementia: a meta-analysis of randomized placebo-controlled trials. *J Alzheimers Dis* 2014;42(3):915-37.
2. Ballard CG, Waite J, Birks J. Atypical antipsychotics for aggression and psychosis in Alzheimer's disease. *Cochrane Database Syst Rev* 2006;(1):CD003476.
3. 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(4):213-8.
4. 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(3):191-210.
5. Cheung G, Stapelberg J. Quetiapine for the treatment of behavioural and psychological symptoms of dementia (BPSD): a meta-analysis of randomised placebo-controlled trials. *N Z Med J* 2011;124(1336):39-50.
6. Loneragan E, Luxenberg J, Colford JM, Birks J. Haloperidol for agitation in dementia. *Cochrane Database Syst Rev* 2002;(2):CD002852.
7. Rosenberg PB, Dye LT, Porsteinsson AP, Pollock BG, Devanand DP, Frangakis C, et al. Change in agitation in Alzheimer's disease in the placebo arm of a nine-week controlled trial. *Int Psychogeriatr* 2015;27(12):2059-67.
8. Campbell N, Ayub A, Malaz Boustani M, Fox C, Farlow MR, Maidment I, et al. Impact of cholinesterase inhibitors on behavioral and psychological symptoms of Alzheimer's disease: a meta-analysis. *Clin Interv Aging* 2008;3(4):719-28.
9. Seitz DP, Adunuri N, Gill SS, Gruneir A, Herrmann N, Rochon P. Antidepressants for agitation and psychosis in dementia. *Cochrane Database Syst Rev* 2011;(2):CD008191.
10. Martínón-Torres G, Fioravanti M, Grimley Evans J. Trazodone for agitation in dementia. *Cochrane Database Syst Rev* 2004;(3):CD004990.
11. Loneragan E, Luxenberg J. Valproate preparations for agitation in dementia. *Cochrane Database Syst Rev* 2009;(3):CD003945.
12. McCracken R, Allan GM. *Agitation in dementia – are benzos a backup?* Edmonton, AB: Tools for Practice; 2015.
13. Allan GM, Behn Smith D. *What are the risks of stopping antipsychotics in the elderly?* Edmonton, AB: Tools for Practice; 2013.
14. Sadowsky CH, Galvin JE. Guidelines for the management of cognitive and behavioral problems in dementia. *J Am Board Fam Med* 2012;25(3):350-66.
15. Husebo BS, Ballard C, Sandvik R, Nilsen OB, Aarstand D. Efficacy of treating pain to reduce behavioural disturbances in residents of nursing homes with dementia: cluster randomised clinical trial. *BMJ* 2011;343:d4065.
16. Bjerre LM, Farrell B, Hogel M, Graham L, Lemay G, McCarthy L, et al. Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia. Evidence-based clinical practice guideline. *Can Fam Physician* 2018;64:17-27 (Eng), e1-12 (Fr).

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