

Review: pharmacological and non-pharmacological interventions improve outcomes in patients with dementia and their caregivers

Doody RS, Stevens JC, Beck C, et al. *Practice parameter: management of dementia (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2001 May 8;56:1154-66.*

QUESTION: Do pharmacological, educational, or other non-pharmacological interventions improve outcomes in patients with dementia or their caregivers?

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Data sources

Studies were identified to July 2000 by searching Medline, EMBASE/Excerpta Medica, CINAHL, *Current Contents*, Psychological Abstracts, PsychINFO, and the Cochrane databases using search terms including Alzheimer's disease (AD), vascular or multi-infarct dementia, dementia with associated parkinsonian disorder, progressive supranuclear palsy, frontotemporal dementia, and senile dementia. Additional search terms were question specific. Bibliographies of relevant papers were also reviewed.

Study selection

Studies were selected if they were randomised controlled trials published in any language or other types of studies published in English, and if they included >20 participants.

Data extraction

Data were extracted on study quality, participant characteristics, interventions, outcome measures, and results.

Main results

380 papers met the selection criteria. Several studies comparing cholinesterase inhibitors (eg, tacrine, donepezil, tartrate, and galantamine) with placebo showed that the drugs were more effective than placebo for improving cognitive outcomes in patients with mild to moderate AD. Studies of cholinergic precursors (eg, lecithin) and muscarinic agonists (eg, xanomeline) have not shown beneficial effects in the treatment of AD. 1 large 2 year study showed that oral selegiline, 5 mg twice daily, and oral vitamin E, 1000 IU twice daily, delayed clinical worsening of AD symptoms; however, no additive effects were seen from the combined use of selegiline and vitamin E. Insufficient data exist to support the use of other antioxidant, anti-inflammatory, or putative disease modifying drugs in the treatment of AD. Antipsychotic drugs were effective for agitation or psychosis in patients with dementia where environmental manipulation failed, and antidepressants (eg, selected tricyclics, monoamine oxidase B inhibitors, and selective serotonin reuptake inhibitors) were effective for depression in patients with dementia. Evidence from observational studies showed that educating family caregivers of patients with AD improved caregiver satisfaction and delayed time to nursing home placement of patients and that educating staff in long term care facilities about AD minimised the unnecessary use of antipsychotic drugs. Randomised trials have shown that behaviour modification, scheduled toileting, and prompted voiding reduced urinary incontinence in people with dementia. Graded assistance, skills practice, and positive reinforcement increased functional independence.

Conclusions

Cholinesterase inhibitors improve outcomes in patients with Alzheimer's disease (AD). Antipsychotics reduce agitation and antidepressants reduce depression in patients with dementia. Education for family caregivers of patients with AD may improve caregiver burden and long term patient outcomes. Non-pharmacological interventions such as behaviour modification are minimally effective.

COMMENTARY

Because the prevalence of dementia continues to increase worldwide, the identification of effective strategies for the care of affected individuals and their caregivers is becoming urgent. Hence, this extensive and rigorous review by Doody *et al* is timely.

Considerable emphasis was given to the promising effects of the newer cholinesterase inhibitors, such as tacrine and donepezil, aimed at slowing cognitive decline and managing difficult behavioural problems in patients with a variety of dementias. The proportion of patients experiencing both desired and adverse drug effects were reported. For the purpose of patient monitoring, it would have been helpful if details about the specific nature of adverse effects had also been described. Patients with dementia are particularly sensitive to the anticholinergic effects of many psychotropic drugs. Furthermore, side effects of confusion and agitation¹ may be mistaken as worsening of the disease itself.

The authors also reviewed studies of non-pharmacological interventions aimed at improving outcomes for patients with dementia and their caregivers. The caregiver education programmes included in the review emphasised family rather than staff, perhaps because the limited research on dementia training for staff has primarily reported staff rather than patient outcomes.

Doody *et al* suggest that non-pharmacological interventions should be implemented first. This is consistent with the US Health Care Financing Administration guidelines for the use of psychotropic drugs in nursing homes, which require that non-pharmacological management be attempted before psychotropic drugs are prescribed, and then only for specific behaviours.²

Because nurses play an important role in dementia care management, they must be aware of a broad range of effective pharmacological and psychosocial treatment modalities. This role requires that the specialised educational needs of nurses caring for patients with dementia and their caregivers be recognised and supported.

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- Zubenko G, Sunderland T. *Geriatric neuropsychopharmacology: why does age matter?* In: Coffey C, Cummings J, editors. *The American Psychiatric Press Textbook of Geriatric Neuropsychiatry*. Washington: American Psychiatric Press, 2000.
- Health Care Financing Administration. *Survey procedures and interpretive guidelines for skilled nursing facilities and intermediate care facilities*. Baltimore: US Department of Health and Human Services, 1990.