

Letter to the editor

A case history illustrating how extended release cholinesterase inhibitors could improve management of Alzheimer's disease¹

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To the editor

Cholinesterase inhibitors such as donepezil, galantamine and rivastigmine can slow the progression of Alzheimer's disease and provide symptomatic relief but require daily administration (donepezil) or twice daily administration (galantamine and rivastigmine). These medications, of course, only have efficacy if actually taken on a regular basis. A clinical vignette is described here of a patient whose memory impairment and social situation combined to make daily medication compliance impossible, highlighting a potential role for new forms of cholinesterase inhibitors administered on a weekly or monthly basis.

An elderly patient living alone in the community (further demographic information omitted to protect privacy) was brought to the office by an adult daughter for evaluation of slowly progressive short-term memory impairment over the past few years. The patient was extremely pleasant, impeccably dressed and slightly amused that the daughter thought anything was wrong. The patient had no other active medical problems except osteoarthritis of the knees and took no regular

medications. The patient had stopped driving and came to the office with either the daughter or friends who still had automobiles. Folstein mini-mental status exam was 19/30 and clock drawing was abnormal (score 2/4). Physical and neurological exams were unremarkable except for motor apraxia on simple tasks. All basic activities of daily living were preserved, and the daughter separately corroborated that there had been no red flag incidents such as the stove being left on, phone calls in the middle of the night or wandering. Based on a diagnosis of probable Alzheimer's disease, a therapeutic trial of donepezil was instituted. However, the patient consistently forgot to take the donepezil except when the daughter was visiting and personally administering the medication. The patient simply forgot the daily dosing even with a 7-week daily blister pack. At the time of this writing, the daughter was preparing to move the patient to an assisted living facility where medication compliance could be assured.

Sustained release or injectable depot forms of cholinesterase inhibitors might have delayed at least for a short time the inevitable placement of this patient, through weekly or monthly office visits centered around medication administration and careful monitoring of functional status. Inability of this patient to self-medicate is a warning sign of other deficits on the horizon, but in this particular instance, the patient probably could have been managed as an outpatient in the early

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stages, and overall memory might have improved somewhat or at least stabilized with cholinesterase inhibitors. Sustained release and depot cholinesterase inhibitors would also have a niche in nursing homes and assisted living facilities, by reducing the number of pills that have to be given on a daily basis. Depot anti-psychotic medications and contraceptives and weekly forms of fluoxetine, paroxetine, alendronate and risedronate

provide a model to follow in future drug development for treatment of Alzheimer's disease. As all who care for dementia patients can attest, even small reductions in caregiver burden can greatly improve quality of life for patients and caregivers alike. In conclusion, efforts to perfect weekly or monthly cholinesterase inhibitors would be a useful step in the continuing fight against Alzheimer's disease.