

## CASE REPORT

# Donepezil for the treatment of psychosis in dementia with Lewy bodies

Dear Editor

Donepezil is currently licensed in the UK for the symptomatic treatment of mild to moderate dementia in Alzheimer's disease only. Levels of choline acetyltransferase may be particularly low in cases of dementia associated with cortical Lewy bodies (DLB) (Perry *et al.*, 1990) and a severe depletion of presynaptic cholinergic projective neurons is associated with an upregulation of m1 receptors in the temporal cortex in DLB (Shiozaki *et al.*, 1999). There have been no published trials of the use of donepezil in DLB, but individual case reports suggest efficacy (Shea *et al.*, 1998; Geizer and Ancill, 1998). We report two DLB cases in which donepezil treatment resulted in significant improvement in behaviour, cognition and psychotic symptoms.

A 77-year-old widow was admitted to hospital from a residential home where she had been increasingly confused and intermittently aggressive to staff and residents. She was refusing to eat or drink because she believed the food was poisoned and had barricaded herself in her room, resulting in the police being called to the home by staff. On admission, her behaviour fluctuated between acute distress and aggression and periods when she was calm and able to interact with staff. When aggressive, she believed she was being bombed, was losing her children and being poisoned. Even when calm, she continued to be confused and to experience psychotic symptoms. Her best score on the MMSE (Folstein *et al.*, 1975) was 5/30. Eighteen days of olanzapine treatment at up to 10 mg per day with additional intramuscular lorazepam at times of severe agitation when her behaviour was thought to put her at physical risk, did not change her behaviour or symptoms. After 14 days of donepezil 10 mg she had no psychotic symptoms, no episodes when she was distressed, her self care improved and she was eating and sleeping well. Olanzapine was stopped and after a

further four weeks she remained free from psychotic symptoms and her MMSE score was 14/30. Having been recommended for continuing care with specialist nursing following her initial assessment, she is now being considered for placement within a nursing home.

A 74-year-old retired engineer with an 18 month history of deteriorating cognitive function and fluctuating mood, was admitted to hospital under Section 2 of the Mental Health Act. This followed two months of fluctuating psychotic symptoms. He had seen grave diggers with distorted faces rising up through his bedroom floor and felt them touch him. He had also gone to the police station in the middle of the night believing he had been kidnapped. On admission, he was fully orientated and scored 29/30 on the MMSE. His speech was rambling however, and he had difficulty explaining and understanding complex ideas. Psychological assessment showed impairment in executive functioning, most marked on non-verbal tests, and marked impairment in visuospatial functions. During the first week of admission there were two episodes in which he experienced visual hallucinations and became very agitated and destructive of ward furnishings. Donepezil 10 mg was started and after one week of treatment he was calmer and his speech was much less circumstantial. After three weeks of treatment there had been no further episodes of agitation or psychotic symptoms and plans are being made for him to return home to live with his daughter.

In both these cases of probable DLB, there was a clear temporal relationship between treatment with donepezil and improvement in behaviour and cognitive function and disappearance of psychotic symptoms. Neither patient had parkinsonian symptoms before or during treatment and firm conclusions cannot be drawn from such open case studies. Given the potential dangers of treating psychotic symptoms in DLB with neuroleptics (McKeith *et al.*, 1992), cholinesterase inhibitors

may offer an effective and safe, if expensive, therapeutic option.

**EMMA FERGUSON**

*SHO in Psychiatry, Maudsley Hospital,  
London SE5 8AZ, UK*

**ROBERT HOWARD**

*Senior Lecturer and Consultant in Old Age Psychiatry,  
Institute of Psychiatry, London SE5 8AF, UK*

## REFERENCES

- Folstein, M. F., Folstein, S. E. and McHugh, P. R. (1975) 'Mini-mental state'. A practical method for grading the cognitive state of patients for the clinician. *J. Psychiatr. Res.* **12**, 189–198.
- Geizer, M. and Ancill, R. J. (1998) Combination of risperidone and donepezil in Lewy body dementia. *Can. J. Psychiat.* **43**, 421–422.
- McKeith, I. G., Fairbairn, A. F., Perry, R. H., Thompson, P. and Perry, E. K. (1992) Neuroleptic sensitivity in patients with senile dementia of Lewy body type. *Br. Med. J.* **305**, 673–678.
- Perry, R. H., Irving, D., Blessed, G., Perry, E. K. and Fairburn, A. F. (1990) Senile dementia of Lewy body type. A clinically and neuropathologically distinct type of Lewy body dementia in the elderly. *J. Neurol. Sci.* **95**, 119–139.
- Shea, C., MacKnight, C. and Rockwood, K. (1998) Donepezil for treatment of dementia with Lewy bodies: a case series of nine patients. *Int. Psychogeriatr.* **10**, 229–238.
- Shiozaki, K., Iseki, E., Uchiyama, H., Watanabe, Y., Haga, T., Kameyama, K., Ikeda, T., Yamamoto, T. and Kosaka, K. (1999) Alterations of muscarinic acetylcholine receptor subtypes in diffuse Lewy body disease: relation to Alzheimer's disease. *J. Neurol. Neurosurg. Psychiat.* **67**, 209–213.