LETTERS

Beneficial effect of zolpidem for dementia

TO THE EDITOR: Zolpidem is an oral imidazopyridine sedative–hypnotic agent with an adverse event profile that includes anxiety, dizziness, drowsiness, and irritability.[1] It is effective for short-term treatment of insomnia. We report improvement in symptoms of dementia in a patient with a 1-year history of unspecified dementia.

Case Report. A recovering 60-year-old alcoholic woman presented with reduced cognitive functions including considerable memory loss, praxis disorders, and inability to join in conversation. Examination revealed extrapyramidal syndrome, minimal pyramidal syndrome, and contralateral synkinesis for each complex movement. Computed tomography to investigate the etiology demonstrated nonspecific cerebral atrophy, and technetium scintigraphy was normal. An electroencephalogram revealed α activity at 10 c/s and slow nonspecific, polymorphous, bilateral activity at 2 c/s in the frontotemporal area. Examination of the cerebrospinal fluid was normal, thus eliminating chronic meningitis, and investigation for Creutzfeldt–Jakob 14-3-3–specific protein on Western blot was also negative. Unspecified dementia resulting from corticobasal atrophy was diagnosed and, after 1 year, she lost the ability to lead a normal social life and perform everyday activities.

Zolpidem 10 mg was prescribed for insomnia. The woman received no other treatment. For a few months, her husband gave her zolpidem each day at 2200 at the start of treatment and then earlier, at 1900. After beginning the earlier administration, he began to notice that, approximately 1 hour after each dose of zolpidem, his wife talked more easily and could wash the dishes and do the housework, things she had lost the ability to do. This beneficial effect was detectable 45–60 minutes after zolpidem administration, lasted for 3 hours after each administration, and then relapsed. The subjective improvement in cognitive functions immediately after drug administration was confirmed several times by the general practitioner after observation of the patient (but no MMS evaluation was performed) and by the patient's family.

Discussion. In this case, the temporal relationship between zolpidem intake (consistent with its pharmacokinetic properties) and improvement in cognitive function, with repetition at each dose, indicated a causal relationship with zolpidem. Many reports have indicated that zolpidem impairs psychomotor and cognitive functions in humans,[2] whereas beneficial effects of zolpidem have been reported for motor symptoms in Parkinson disease,[3] progressive nuclear palsy,[4] and catatonia.[5] However, to our knowledge, this is the first published case of improvement in dementia with zolpidem. Three other cases of similar beneficial effects of zolpidem have been reported to the French Drugs Agency (equivalent to the Food and Drug Administration). The effect lasted for 1 to a few hours in all patients, but persisted in only 1 patient. The mechanism of this beneficial effect of zolpidem on cognitive functions is not understood, but several cases of zolpidem abuse and/or dependence have been described,[6] and some patients have reported stimulating effects and euphoria. Gericke and Ludolph[7] reported a 33-year-old man with major depression who developed chronic zolpidem abuse because of a psychomotor stimulant action. He experienced regained energy in mental and physical activity 20 minutes after ingesting zolpidem that lasted 5–6 hours.

The kinetic profile of zolpidem (time to maximum concentration 1–3 h, half-life 2.4 h) is compatible with the fact that in some cases[4,7] and in our patient, the beneficial effect was detectable 20–60 minutes after zolpidem administration and lasted 2–5 hours. This novel effect of zolpidem is of interest and suggests that larger scale, placebo-controlled studies are warranted.

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