Visuoperceptual Task Performance in Dementia with Lewy Bodies

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BACKGROUND

The profile of cognitive impairment in DLB may have some important features. Relative to AD, DLB patients have been shown to show a greater impairment to executive function and attention and a lesser impairment to memory(1). In addition, there may be also relatively greater visuoperceptual function which may be important in the assessment of efficacy in studies of DLB.

MATERIALS AND METHODS

The patients were ≥ 50 years of age and met consensus criteria for a diagnosis of DLB(4, 5), with screen scores on the MMSE > 18 and MMS(2, 3). Patients had to be living at home or in a residential care setting with daily visits from a responsible caregiver. Additional requirements were intact reading ability and a continued understanding of their native language (English or French). Patients with any other neurodegenerative disorder were excluded from the study.

STUDY DESIGN

This was a multicenter, investigator-initiated, open-label flexible-dose (8-24 mg/day) study of galantamine in 50 patients with mild to moderately severe DLB. The patients received galantamine 8 mg/day in divided doses for 4 weeks, then 16 mg/day for 4 weeks, followed by 24 mg/day (or highest tolerated dose) until the end of the 24-week study (galantamine hydrochlo- ride, Janssen Pharmaceuticals, L.P., Titusville, N.J., USA). One dose reduction was permitted if any patient experienced persistent adverse effects.

ASSESSMENTS

Cognition assessment during the study included two computerized test batteries, both of 30-minute duration: The CDR System; and a Visuoperceptual System, which have both been described in detail previously(6, 7). Five composite scores were derived from the CDR System task measures.

RESULTS

BASAL CHARACTERISTICS

The mean age of the patients was 76.5 years (range 50 to 91). Twenty-nine patients (58%) were male and 21 (42%) were female. Mean MMSE at baseline was 20.8 (range 7 to 30).

TABLE 2: Visuoperceptual System Composite Score Performance

<table>
<thead>
<tr>
<th>Task</th>
<th>Time point</th>
<th>Mean</th>
<th>SD</th>
<th>F(2,37)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual discrimination (mm)</td>
<td>Baseline</td>
<td>6.32</td>
<td>2.19</td>
<td>F(2,37)=1.99, p=0.15</td>
<td></td>
</tr>
<tr>
<td>Object form perception (%)</td>
<td>Baseline</td>
<td>0.95</td>
<td>0.49</td>
<td>F(2,37)=0.60, p=0.55</td>
<td></td>
</tr>
<tr>
<td>Motion perception (%)</td>
<td>Baseline</td>
<td>0.99</td>
<td>0.34</td>
<td>F(2,37)=0.30, p=0.74</td>
<td></td>
</tr>
</tbody>
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