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Commentary

C. Ballard

Byrne provides an excellent clinical overview. However, I have selected four areas of clinical interest for more detailed consideration.

Psychiatric symptoms

All the studies in this area have identified visual hallucinations as a common symptom in LBD, occurring in a significantly higher proportion of patients with LBD compared with those with Alzheimer's disease. The prevalence rates of visual hallucinations do depend on the origin of the sample, occurring in 70% of patients from psychiatric cohorts and 20–30% of those in samples from neurological settings (Ballard *et al*, 1985).

Phenomenologically, these hallucinations are similar to those experienced by patients suffering from a wide variety of conditions including Parkinson's disease (Cummings, 1992) and the Charles Bonnet syndrome (Howard & Levy, 1994). Visual hallucinations are found to be more persistent (McShane *et al*, 1995; Ballard *et al*, 1997*a*) and also more severe in patients with LBD compared with sufferers of Alzheimer's disease (Ballard *et al*, 1995*a*). Other common psychotic symptoms in LBD include delusions, auditory hallucinations (Ballard *et al*, 1995*b*; Krzyminski, 1995) and delusional misidentification (Ballard et al, 1998*b*), all of which have higher prevalence rates than is seen in Alzheimer's disease.

Significant depression has been identified in 14–50% of patients with LBD (Klatka *et al*, 1996). There is insufficient evidence to suggest that depression is a helpful diagnostic discriminator, yet it is clear that it is a common occurence in patients with LBD and more information is needed about the effects, associations and outcome of depression in these individuals. Data from the Newcastle study (Ballard *et al*, 1997*b*) suggest a significant association with the severity of Parkinsonism, which would make intuitive sense given the high prevalence of depression among patients with Parkinson's disease.

Neuroleptic sensitivity reactions

McKeith *et al*'s (1992) series, reporting severe neuroleptic sensitivity reactions in LBD, had a huge impact upon clinical practice and was a

Clive Ballard is MRC Clinical Scientist/Honorary Consultant Psychiatrist/Honorary Senior Lecturer at the MRC Neurochemical Pathology Unit, Newcastle General Hospital, Westgate Road, Newcatle upon Tyne NE4 6BE.

major catalyst for the Chief Medical Officer's recommendations regarding the judicious prescription of neuroleptic drugs to patients with dementia. Several individual reports subsequently appeared in the literature pertaining to the treatment of patients with LBD and psychosis with newer atypical antipsychotics, and perhaps led to complacency regarding the need for close supervision. In a more recent cohort of patients from Newcastle who were studied prospectively, we reported that severe neuroleptic sensitivity was seen in 29% of patients with LBD who received neuroleptics (Ballard *et al*, 1998*a*). All reactions occurred within two weeks of a new neuroleptic prescription or a dose change and were associated with a significant reduction in survival, consistent with previous observations (McKeith *et al*, 1992). Side-effects during previous neuroleptic treatment may be an important indicator.

Forty-seven per cent of neuroleptics prescribed were newer, atypical compounds compared with 16% in the 1992 series. It should be noted that sensitivity reactions still occur despite low dosing and the use of atypical agents. If it is necessary to prescribe neuroleptics to patients with LBD, close monitoring in a hospital setting is advisable, particularly during the first week of prescription or following dose changes.

Falls

Falls are common in all dementia sufferers and represent a major cause of morbidity, disability, institutionalisation and mortality. Across studies, falls have a prevalence rate of approximately 50% among patients with LBD , although when recorded from case notes or by informant interview distinction between sufferers of LBD and Alzheimer's disease was not possible. Recent work in Newcastle suggests that multiple falls are significantly more common in sufferers of LBD if measured accurately using a daily falls diary, with 37% of patients with LBD experiencing five or more falls in three months. The severity of Parkinsonism is the main association.

Clinical diagnosis

International consensus criteria for the clinical pathological diagnosis of LBD were published in 1996 (McKeith *et al*, 1996). These recommend that a clinical diagnosis of probable LBD should be made in the presence of a dementia syndrome with prominent attentional deficits, subcortico-frontal dysfunction and prominent visuo-spatial impairments, accompanied by any two of: fluctuating cognition, persistent visual hallucinations and motor features of Parkinsonism. A retrospective validation study supported the usefulness of these criteria suggesting a positive predictive value >70% (Mega *et al*, 1996).

The sensitivity and specificity of clinical diagnoses in the first 50 prospectively studied cases coming to post-mortem in Newcastle were: Alzheimer's disease, 0.87 and 0.83; LBD, 0.83 and 0.91; and Vascular dementia, 0.40 and 0.93 (McKeith *et al*, 1998). Two clinical false positive and five false negative diagnoses of LBD were made. Four of the neuropathologically confirmed cases of LBD which were not identified by clinicians had additional vascular features.

This suggests that the criteria can be used to diagnose LBD clinically within a specialised service. There may, however, be difficulty in generalising these findings to other settings. Visual hallucinations are said to be typically persistent or recurrent, but no specific time frames are given. Fluctuation has not been operationalised and inter-rater reliability is a problem (Mega, 1996). Clearly improved operationalisation is required and further consideration needs to be given to incorporating neuropsychological profiles and other psychiatric symptoms within the operationalised diagnostic framework.

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