

Dementia with Lewy bodies

Most experts estimate that [dementia](#) with [Lewy bodies](#) is the third most common cause of dementia after Alzheimer's disease and vascular dementia, accounting for 10 to 25 percent of cases.

The hallmark brain abnormalities linked to DLB are named after Frederick H. Lewy, M.D., the neurologist who discovered them while working in Dr. Alois Alzheimer's laboratory during the early 1900s. Alpha-synuclein protein, the chief component of Lewy bodies, is found widely in the brain, but its normal function isn't yet known.

Lewy bodies are also found in other brain disorders, including Alzheimer's disease and Parkinson's disease dementia. Many people with Parkinson's eventually develop problems with thinking and reasoning, and many people with DLB experience movement symptoms, such as hunched posture, rigid muscles, a shuffling walk and trouble initiating movement.

This overlap in symptoms and other evidence suggest that DLB, Parkinson's disease and Parkinson's disease dementia may be linked to the same underlying abnormalities in how the brain processes the protein alpha-synuclein. Many people with both DLB and Parkinson's dementia also have plaques and tangles — hallmark brain changes linked to Alzheimer's disease. Sign up for our enews to receive updates about Alzheimer's and dementia care and research.

Symptoms of dementia with Lewy bodies include:

Changes in thinking and reasoning
Confusion and alertness that varies significantly from one time of day to another or from one day to the next

Parkinson's symptoms, such as a hunched posture, balance problems and rigid muscles
Visual hallucinations
Delusions
Trouble interpreting visual information
Acting out dreams, sometimes violently, a problem known as rapid eye movement (REM) sleep disorder
Malfunctions of the "automatic" (autonomic) nervous system
Memory loss that may be significant but less prominent than in Alzheimer's

Diagnosis

As with other types of dementia there is no single test that can conclusively diagnose dementia with Lewy bodies. Today, DLB is a "clinical" diagnosis, which means it represents a doctor's best professional judgment about the reason for a person's symptoms. The only way to conclusively diagnose DLB is through a postmortem autopsy.

Many experts now believe that DLB and Parkinson's disease dementia are two different expressions of the same underlying problems with brain processing of the protein alpha-synuclein. But most experts recommend continuing to diagnose DLB and Parkinson's dementia as separate disorders.

The diagnosis is DLB when:
Dementia symptoms consistent with DLB develop first
When both dementia symptoms and movement symptoms are present at the time of diagnosis
When dementia symptoms appear within one year after movement symptoms.
The diagnosis is Parkinson's disease dementia when a person is originally diagnosed with Parkinson's based on movement symptoms, and dementia symptoms don't appear until a year or more later. Since Lewy bodies tend to coexist with

Alzheimer's brain changes, it may sometimes be hard to distinguish DLB from Alzheimer's disease, especially in the early stages.

Key differences between Alzheimer's and DLB Memory loss tends to be a more prominent symptom in early Alzheimer's than in early DLB, although advanced DLB may cause memory problems in addition to its more typical effects on judgment, planning and visual perception. Movement symptoms are more likely to be an important cause of disability early in DLB than in Alzheimer's, although Alzheimer's can cause problems with walking, balance and getting around as it progresses to moderate and severe stages. Hallucinations, delusions, and misidentification of familiar people are significantly more frequent in early-stage DLB than in Alzheimer's. REM sleep disorder is more common in early DLB than in Alzheimer's. Disruption of the autonomic nervous system, causing a blood pressure drop on standing, dizziness, falls and urinary incontinence, is much more common in early DLB than in Alzheimer's.

Causes and risks

Researchers have not yet identified any specific causes of dementia with Lewy bodies. Most people diagnosed with DLB have no family history of the disorder, and no genes linked to DLB have been conclusively identified.

Differential diagnosis

Dementia with Lewy bodies differential diagnosis.

Differential diagnosis between [Parkinson's disease](#) (PD) [dementia](#) and dementia with Lewy bodies (DLB) is difficult due to standard features, whereas management decisions and research endpoints depend upon knowledge of dementia severity. We aimed to assess risk factors for age at dementia onset, as well as which neuropsychiatric features are associated with pharmacotherapy and signs and symptoms of Lewy body dementia.

Patients with PD dementia or DLB were evaluated for age at disease onset, education, sanitation, anthropometric measures, alcohol use, smoking, history of infections or head trauma with unconsciousness, family history of neurodegenerative diseases, functional independence, cognition, behavior, motor features, caregiver burden and pharmacotherapy.

Fifty-one patients were recruited (37 with DLB, and 14 with PD dementia). Cumulative alcohol use and married status were associated with earlier dementia onset, whereas a history of treated systemic infections and cumulative family history of primary neurodegenerative diseases led to later dementia onset. The length of dementia was shorter only for severely impaired patients who used antidepressants, but not for users of cholinesterase inhibitors, while no behavioral symptom was associated with dopaminergic therapy. Night-time behavior disturbances were inversely associated with sleep satisfaction, while caregiver burden was more affected by depression and motor features. Non-motor symptoms were more burdensome for patients with DLB, while in PD dementia anxiety and dysphoria occurred when motor features were less burdensome.

PD dementia and DLB are two phenotypes of the same pathological entity, differing mostly by the occurrence of parkinsonian signs. Predictors of dementia onset differ from other neurodegenerative diseases ¹⁾.

Treatment

Dementia with Lewy bodies Treatment

1)

de Oliveira FF, Machado FC, Sampaio G, Marin SMC, Naffah-Mazzacoratti MDG, Bertolucci PHF. Neuropsychiatric feature profiles of patients with Lewy body dementia. Clin Neurol Neurosurg. 2020 Apr 8;194:105832. doi: 10.1016/j.clineuro.2020.105832. [Epub ahead of print] PubMed PMID: 32311617.

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