

Lewy Body Dementia: Clinical, Presentation, Diagnosis, and Care Implications

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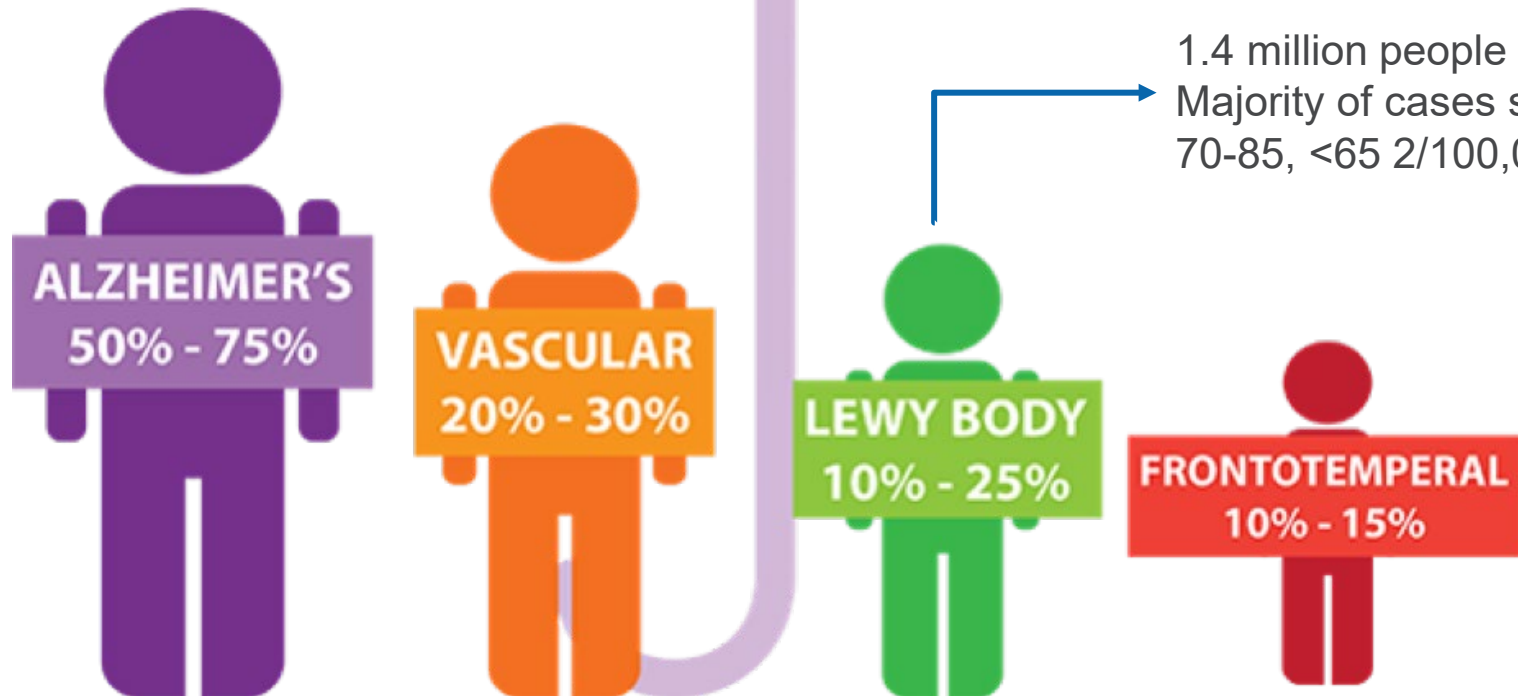


Outline

1. Clinical Features of Lewy body dementia
2. Biomarker assistance in making the diagnosis
3. Symptomatic treatment options

DEMENTIA

An “umbrella” term used to describe a range of symptoms associated with cognitive impairment.



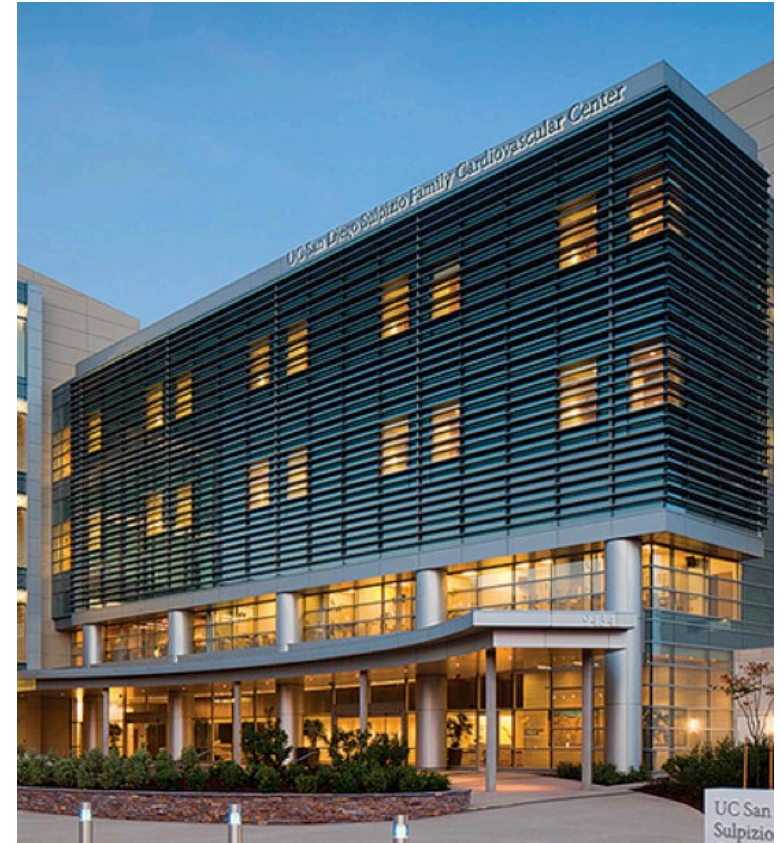
Lewy Body Dementia Clinical Features

Essential

- Progressive substantial decline in memory and thinking

Core Features

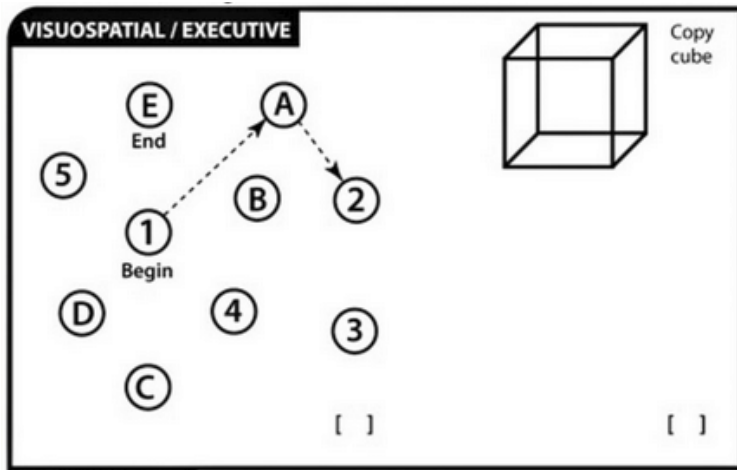
- Fluctuating cognition
- Visual hallucinations
- Parkinsonism
- REM sleep behavior disorder (RBD)



Cognitive Impairment in DLB

Aspects of thinking that are often affected:

- Attention: trouble following conversation, losing train of thought
- Executive Function: planning, multitasking
- Visuospatial Function: Getting lost, judging distances and orientation, trouble getting dressed
- (Short term memory less affected)

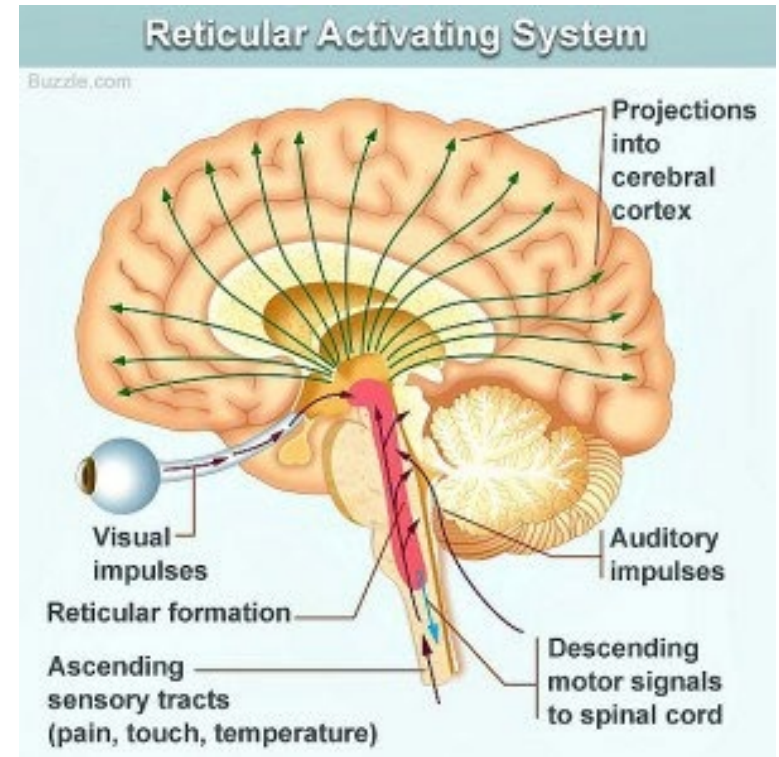


Cognitive Fluctuations

Spontaneous alterations in cognition, attention, or arousal

- Periods of being 'normal' and then periods of minutes to hours of
 - Confusion
 - Sleepiness, hard to arouse
 - Slurred speech
 - Starring off into space for long periods

Sometimes prompts Emergency Room Visits



Visual Hallucinations

Well-formed, spontaneous

- Insects, animals, children, other people

Less severe versions

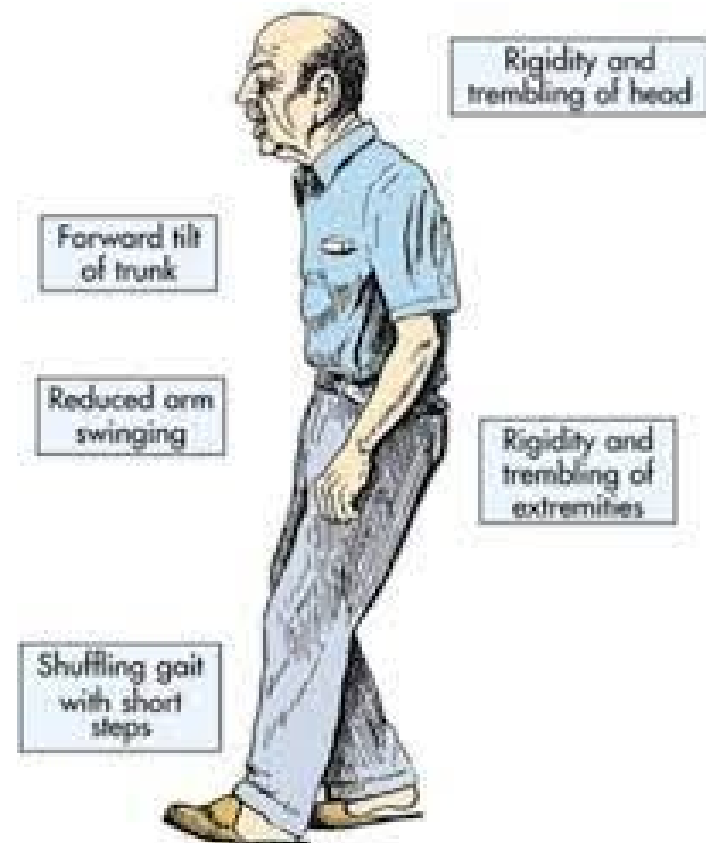
- Presence/Passage sensations
- Visual illusions arising from other objects (i.e. face in the clouds, person in the curtains)



Parkinsonism

At least one of the following

- Stiffness of arm(s) or leg(s)
- Slowness of movement (hands, feet)
- Tremor that comes out when relaxed
- Slowed gait, short shuffling strides, hunched posture



REM Sleep Behavior Disorder (RBD)

During REM sleep, the body is typically paralyzed except for the eyes.

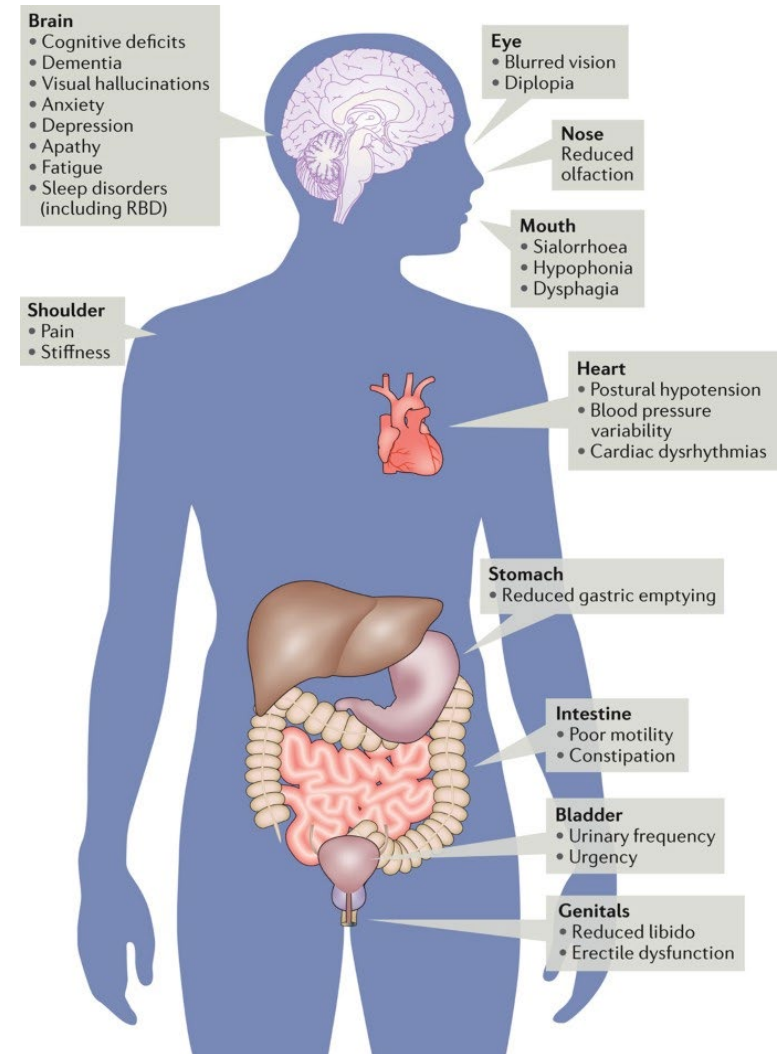
In RBD, that mechanism doesn't work and people act out their dreams

- Punching, kicking
- Talking or shouting
- Falling out of bed
- Performing complicated coordinated movements
- Bed partners will report first and can be injured



Other Features

- Loss of sense of smell
- Postural instability -> Falls
- Lightheadedness on standing from drops in blood pressure
- Constipation
- Urinary frequency/urgency
- Delusions
- Anxiety/Depression
- Apathy
- Excessive salivation



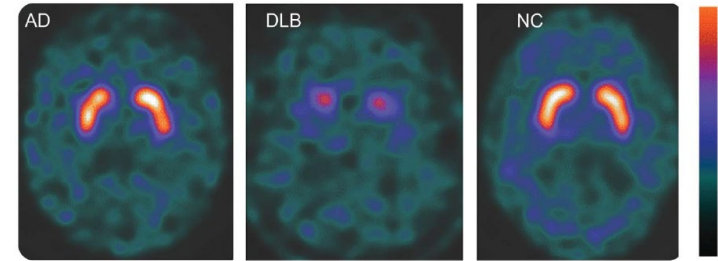
Diagnosis

- The diagnosis of DLB can be made on clinical grounds alone
- Biomarker testing can assist in diagnostic certainty though

Tools to Aid in the Diagnosis

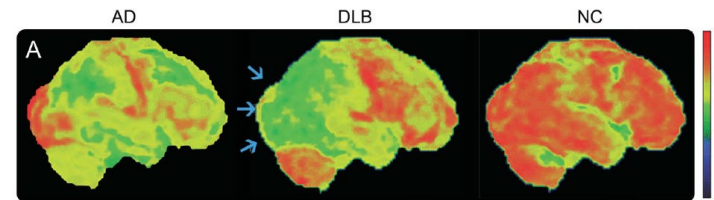
1. DAT Scan

- Assesses for damage to dopamine producing system



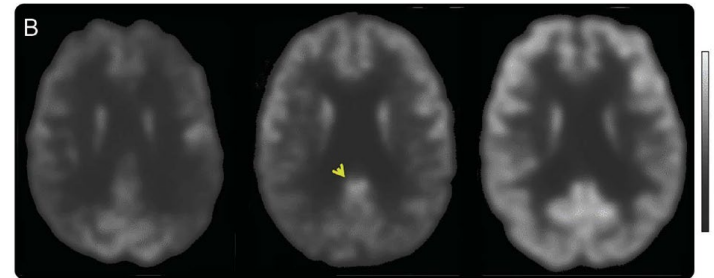
2. FDG-PET

- Shows brain areas of relative activity



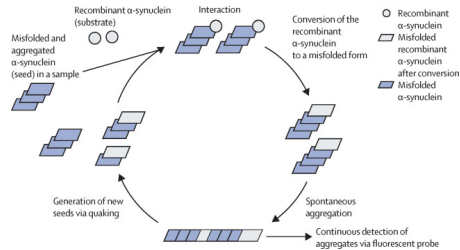
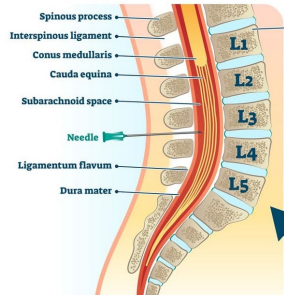
3. Polysomnogram

- Can be used in the formal diagnosis of RBD and to rule out mimics (sleep apnea, others)

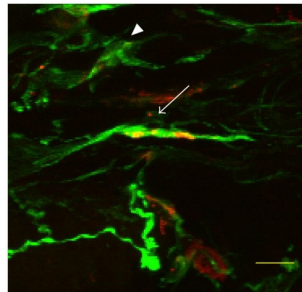
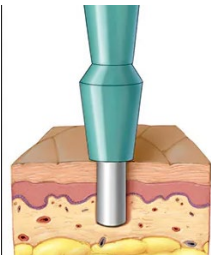


4. Others (Cardiac scintigraphy, EEG)

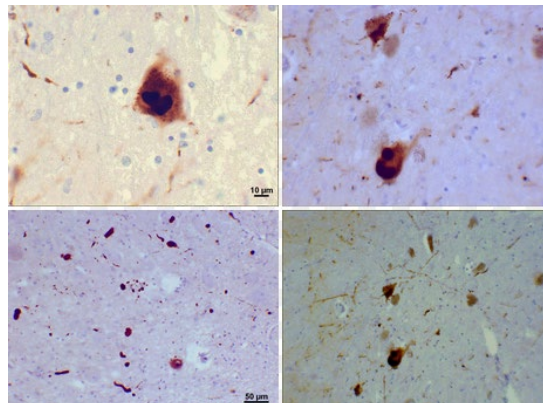
Tools to Aid in the Diagnosis: Spinal Fluid and Skin Biopsies



α -Synuclein
Seeding
Amplification
Assays



α -Synuclein Skin
biopsy
immunofluorescence



Emerging Concepts

1. Prodromal DLB, MCI-LB

- There are changes in the brain that are happening before major cognitive symptoms and other clinical features appear
- RBD, hyposmia can occur many years before cognitive decline
- aSyn-SAA testing shows abnormalities also years before cognitive decline

2. Mixed pathologies

- Under the microscope, ~70% of brains from patients with DLB will have additional Alzheimer's disease pathology
- Lewy body disease + Alzheimer's disease may have some unique clinical attributes
- Tools for measuring AD pathology: PET scans, CSF, blood (plasma ptau217)
- Does this affect treatment?

Symptomatic Treatment of Core Features

Cognition:

- Cholinesterase inhibitors: Donepezil and Rivastigmine
- Memantine: use is less clear

Visual hallucinations, delusions:

- Low dose quetiapine (Seroquel), pimavanserin (Nuplazid), clozapine: So far unstudied in DLB

Parkinsonism:

- Slow Carbidopa/levodopa titration

RBD

- Melatonin, Clonazepam

Treatment of other features

Low blood pressure / Orthostatic Hypotension:

- Fluid Intake, Salt intake, Compression stockings
- Fludrocortisone, midodrine, droxidopa

Gait instability/Falls:

- PT
- Gait assistance as needed (walker etc)
- OT and home safety assessments

Dysphagia and voice volume

- Speech therapy
- Diet consistency modifications

Drooling:

- Botulinum toxin injections

Anxiety/Depression

- SSRI type medications

Resources

- Lewy Body Disease Association (LBDA)



- Parkinson's disease association of San Diego (PASD)



END

Lewy Body Dementias

Dementia with Lewy Bodies:

- Cognitive Impairment
- Parkinsonism
- Visual Hallucinations
- Cognitive Fluctuations
- REM sleep behavior disorder
- (other features)

Parkinson's disease dementia

- ≥ 1 year of motor parkinsonism before cognitive impairment

