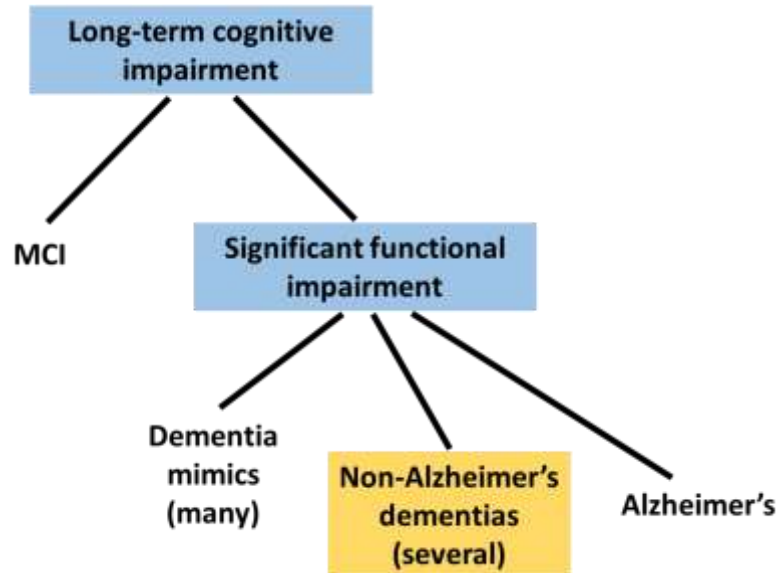


Adjourning Alzheimer's

Non-Alzheimer's Dementias (Day 46)



Interestingly, Alzheimer's is **not** the only pathological process culminating in dementia.

There are several **non-Alzheimer's pathological processes** that may also do so, the most common of which include vascular, Lewy body, and frontotemporal dementia. Before a diagnosis of Alzheimer's can be made, these alternative possibilities have to be definitively ruled out, which is sometimes easier said than done.

Each non-Alzheimer's dementia results from a **signature pathological process**, marked by **hallmark clinical features**:

(1) In **vascular dementia**, the pathological process is **ischemic** (a series of artery blockages or bleeds leading to multiple strokes and areas of brain death), culminating in the hallmark clinical feature of **step-by-step cognitive decline**.

(2) In **Lewy body dementia**, the pathological process is **neurodegenerative** (slow death of neurons) and involves **Lewy bodies**, producing hallmark clinical features of **fluctuating alertness**, **visual hallucinations**, and **parkinsonism** (features that look like Parkinson's disease).

(3) In **frontotemporal dementia**, the pathological process is **neurodegenerative** and involves tau, producing hallmark clinical features of **disinhibited social conduct** and **blunted emotions**.

Shown below are the major **non-Alzheimer's dementias**, along with their hallmark clinical features (notably, two dementia processes sometimes occur together):

(1) Vascular dementia (step-by-step cognitive decline).

(2) Lewy body dementia (fluctuating alertness, visual hallucinations, parkinsonism).

(3) Frontotemporal dementia (blunted emotions, disinhibited social conduct).

(4) Mixed dementia (usually, Alzheimer's plus vascular dementia).

Non-Alzheimer's dementias

Vascular dementia is the most common of the non-Alzheimer's dementias. If we utilize the **5-step approach**, the diagnosis of vascular dementia is usually straightforward:

(1) Corroborated history

Usually, the person describes an abrupt or step-by-step deterioration in cognition. They may also mention a weak or numb area of their body, or difficulty seeing or walking (including falls). There will have been at least one new stroke within the last 3 months.



(2) Focused examination

The examination may reveal hypertension, as well as one or more focal neurological deficits such as a weak or numb arm or leg, a visual field disturbance, or an abnormal gait.



(3) Cognitive and functional scales

Most cognitive and functional scales will be below normal. In significant vascular dementia, the Hachinski Ischemia score will be over 4.



(4) Laboratory tests

Blood tests will be normal, although diabetes markers may be increased. Lumbar punctures are only done in exceptional circumstances and will be normal.



(5) Brain imaging

CT and MRI scans will show one or more strokes. There may be leukoariorosis, an abnormality of the brain's deep "white matter" indicating poor blood flow. PET scans are not useful.

Epidemiologically, the non-Alzheimer's dementias comprise **20-30% of all dementia cases**. Vascular dementia accounts for **10-20% of all cases** and commonly occurs in people with cardiovascular risk factors (such as type 2 diabetes, hypertension, heart disease, or peripheral vascular disease). Lewy body dementia accounts for **5-10% of all cases**, frontotemporal dementia about **5% of all cases**.

Bear in mind, is **not always easy** for a doctor to provide a definitive diagnosis in the early stages of a non-Alzheimer's disorder. Sometimes, even using a thorough approach, the diagnosis is elusive. In this case, a wait-and-watch approach may need to be adopted, which may not be easy (for anyone). However, given a solid approach plus adequate knowledge of the non-Alzheimer's dementias and their hallmark clinical features, the correct diagnosis can usually be made.

To sum up, several non-Alzheimer's pathological processes may also culminate in dementia, namely vascular, Lewy body, and frontotemporal dementia. However, since the dementia syndrome produced by each disorder is due to a **signature pathological process** marked by a cluster of **hallmark clinical features**, they can usually be diagnosed with confidence - but sometimes, it's hard.

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References

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