

Different Types of Dementia

Lesson Summary

Introduction

Dementia is a general term for a decline in cognitive function severe enough to interfere with daily life. It is most commonly caused by **toxic proteins** or **blood vessel damage** in the brain, or a mix of those causes. The **symptoms and signs** of dementia can vary based on the **cause** and the **area of the brain** affected.

It is often difficult to distinguish between the different types of dementia, and many people may have a mix of more than one type. There is no easy way to make a definite diagnosis, as there is not necessarily one clear test to confirm it. Signs and symptoms may change or evolve over time, leading to changes in the most likely underlying diagnosis or cause of the dementia.

Different types of dementia

Alzheimer disease

Alzheimer disease is the most common cause of dementia, accounting for the majority of cases. The risk of developing Alzheimer disease increases with age, typically starting in the 70s or 80s. The disease most commonly progresses steadily and gradually, leading to a decline in memory, learning, and other cognitive functions over several years.

The toxic proteins involved in Alzheimer disease, such as amyloid beta, tend to damage parts of the brain related to memory and learning, particularly the middle temporal lobes and hippocampus. This results in short-term memory problems, where individuals may remember past events but struggle to recall recent occurrences.

Common symptoms include:

- Short-term memory problems (e.g., repeating stories, missing appointments)
- Visual and spatial issues (e.g., getting lost, misjudging distances)
- Language difficulties (e.g., word finding, understanding complex explanations)
- Certain movement problems (e.g., difficulty with tasks like buttoning shirts)
- Thinking problems (e.g., difficulty with multitasking, planning)
- Behavioural and psychological issues (e.g., apathy, depression, paranoia)

Vascular dementia

Vascular dementia is the second most common type of dementia, caused by slow and steady damage to small blood vessels in the brain or by strokes. The cognitive decline can happen immediately after a stroke or gradually over time. Up to one-third of people who have a stroke develop permanent cognitive problems.

The symptoms of vascular dementia depend on the location of the brain damage and can include:

- Poor executive function (e.g., trouble planning and organizing)
- Complex attention difficulties (e.g., easily distracted)
- Slowness of thinking
- Emotional extremes and quick mood changes
- Decreased motivation (apathy)
- Memory retrieval issues

Unlike Alzheimer disease, people with vascular dementia can often make new memories but may have difficulty retrieving them. The progression of vascular dementia can be sudden or gradual, often showing a stepwise pattern of decline.

Dementia with Lewy bodies

Dementia with Lewy bodies results from the build-up of abnormal proteins (Lewy bodies) in the brain and typically develops in individuals in their mid-70s and progresses gradually. It shares symptoms with both Alzheimer and Parkinson diseases.

Symptoms include:

- Fluctuating alertness and cognitive function
- Visual hallucinations
- Parkinsonism (e.g., tremor, muscle stiffness)
- Sleep disorders
- Repeated falls and fainting
- Sensitivity to antipsychotic medications

Differentiating dementia with Lewy bodies from Parkinson disease dementia can be challenging due to overlapping motor symptoms. Generally, cognitive problems appear first in dementia with Lewy bodies, whereas the motor symptoms appear much earlier in Parkinson disease dementia.

Parkinson disease dementia

Parkinson disease dementia occurs in individuals with Parkinson disease, typically many years after the initial diagnosis. The cognitive decline follows the onset of Parkinson's motor symptoms, such as slowness of movement and difficulty starting movements.

Symptoms include:

- Slowness of thought and speech.
- Impaired executive function.
- Decreased motivation (apathy).
- Depressed mood and anxiety.
- Hallucinations and delusions.
- Sleep-related behaviours and daytime sleepiness.

The cognitive problems in Parkinson disease dementia continue to worsen gradually over time.

Frontotemporal dementia

Frontotemporal dementia results from the accumulation of toxic proteins in the frontal and temporal lobes of the brain, leading to significant changes in personality and behaviour. The disease typically presents in individuals in their 50s or 60s and the rate of progression can vary depending on the subtype and person, though it usually progresses more rapidly than Alzheimer disease.

Symptoms include:

- Changes in personality and behaviour (e.g., inappropriate actions, lack of empathy)
- Language difficulties
- Obsessive or repetitive behaviours
- Increased need to eat, hyperorality
- Loss of motivation (apathy)

Mixed dementia

Mixed dementia is a combination of two or more types of dementia, with Alzheimer disease and vascular dementia being a common combination. The symptoms of mixed dementia vary depending on the types involved, and the progression can be more complex due to the presence of multiple types of brain changes. Diagnosing mixed dementia can be challenging, as there is often no clear test to confirm the diagnosis, and symptoms may change or evolve over time.

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