

The General Features of Subcortical Dementias Differing from Cortical Dementias

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DESCRIPTION

Slowness in mental processing, forgetfulness, impaired cognition, apathy, and depression are clinical symptoms of subcortical dementia. The concept has been expanded to account for the intellectual impairment caused by Parkinson's disease, Wilson's disease, spinocerebellar degenerations, idiopathic basal ganglia calcification, the lacunar state, and the dementia syndrome of depression. It was first recognised in progressive supra-nuclear palsy and Huntington's disease. Pathologic alterations primarily affect the thalamus, basal ganglia, and associated brain-stem nuclei in disorders exhibiting subcortical dementia, sparing the cerebral cortex. These structures are also thought to play a role in arousal, attention, emotion, motivation, language, memory, abstraction, and visuospatial abilities, according to recent investigations of neuro-psychologic abnormalities following focal subcortical lesions. Subcortical dementia's clinical features are distinct from those of Alzheimer's-type dementia, which is marked by extensive cerebral cortical involvement and results in aphasia, forgetfulness, agnosia, and apraxia.

Subcortical dementias

Dementias classified as subcortical includes those conditions that primarily impact the basal ganglia and display signs of cognitive deterioration.

Progressive supra-nuclear palsy, Huntington's chorea, and Parkinson's disease are among the cortical dementias that differ from Alzheimer's disease in a number of ways. Furthermore, some patients exhibit clinically moderate delayed cognition, aberrant movement, and motility issues.

Clinical features: Clinically, subcortical dementia is typically characterised by traits such as sluggish mental processing, impaired cognition, lack of initiative and apathy, depressive symptoms (such as anhedonia, negative thoughts, loss of self-esteem, and dysphoria), loss of social skills, and extrapyramidal traits such as tremors and abnormal movements. The change in personality is the first clinical symptom to manifest in the majority of Huntington's disease patients. In people with early-stage Huntington's disease, the dementia is more severe.

Parkinson's disease is characterised by older-age dementia-like symptoms. The "leukodystrophy" of adults also results in subcortical dementia with distinct frontal lobe characteristics. The first signs of "cortical" dementia typically involve difficulties with high-level skills including memory, language, reasoning, abstract cognition, and problem-solving. These behaviours are all connected to the cerebral cortex. These patients experience severe apraxia and agnosia. However, these high-level behaviours are less impacted by "subcortical" dementia.

The cerebral cortex exhibits widespread deterioration in the majority of prevalent kinds of dementias, including the plaques and neurofibrillary tangles that characterise Alzheimer's disease. Regions under the brain that are specifically damaged are those with subcortical dementia.

The thalamus, basal ganglia, and rostral brain stem nuclei are largely affected, as are certain projections from these regions to the cortex in the white matter, with the cerebral cortex being relatively spared in the degenerative process that leads to subcortical dementia. It impacts extrapyramidal functioning, arousal, attention, emotion, motivation, language, memory, abstraction, social skills (particularly empathy), and visuospatial abilities. Amnesia and psychotic illnesses can also result from basal forebrain injury.

Cortical dementias

The section of the brain that most individuals are familiar with, at least in terms of appearance, is the cortex (the name "cortical" refers to the cortex). The distinctive curves and twists of the outer layers are crucial for the processing of information and for processes like language and memory. The grey matter of the brain is often linked to cortical dementia. Higher mental capacities are controlled by the cerebral cortex, which is a component of the brain. It manages language, social skills, problem-solving, and memory. The five senses—sight, hearing, touch, taste, and smell—are also processed by it.

Cortical dementia comes in a variety of forms, although Alzheimer's and frontotemporal lobe dementias are the most prevalent.

The causes, symptoms, and treatments of cortical dementia are:

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Frontal lobe: Governs a person's capacity for problem-solving, decision-making, and emotional regulation. It also regulates motor skills, speech, and language functions.

Parietal lobe: This lobe is mostly in charge of taking in sensory information. It regulates spatial awareness, enabling movement without running into objects. Additionally, it regulates hand-eye coordination, detects the hardness or softness of objects, and processes abilities like math and spelling.

Occipital lobe Regulates visual perception and interprets what a person sees.

Temporal lobe Charge of processing language and sounds, including music, and it also governs a person's capacity to identify people. The hippocampus, a portion of the temporal lobe, is crucial for memory and learning.

Types of cortical dementia

- Alzheimer's condition
- Dementia with frontotemporal lobes
- Lewy body dementia

- Posterior cortical atrophy
- Creutzfeldt-Jakob disease

CONCLUSION

A person's ability to think clearly gradually deteriorates as dementia progresses. Dementia patients may grow more and have problems focusing or paying attention. They might lose their aptitude for language, math, and problem-solving. Some dementia sufferers may struggle to control their emotions and exhibit irritability or aggression. Others might begin acting inappropriately. People who have dementia will struggle with daily duties as their condition worsens and will need others to help care for them. Although there is no known cure, doctors can give medications to assist patients manage their symptoms. Damage to areas of the cerebral cortex of the brain is referred to as cortical dementia. Memory loss, deterioration in reasoning ability, and personality changes are among the symptoms. Cortical dementias include frontotemporal lobe dementias and Alzheimer's disease.