

The Different Types of Neurodegenerative Brain Diseases: Is it Always Alzheimer's Disease?

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The diagnostic criteria for Alzheimer's Disease (AD) requires a history of a gradual onset and progressive decline in memory with at least one other cognitive domain affected (e.g. language, attention, etc.). The cognitive impairment must also negatively impact the ability to perform activities at the previous level of function. Establishing a diagnosis of AD in persons recently admitted to a nursing home can be challenging, especially if the patient was not previously known by the clinician. An important component of the initial assessment is an interview, in person or by phone, with a family member or friend who can provide details of the cognitive and physical function of the individual prior to admission.

Hallucinations and delusions may occur in moderate and severe AD; however, if persons with mild memory loss have hallucinations or delusions, dementia with Lewy bodies (DLB) must be considered. Dementia with Lewy bodies is characterized by cognitive impairment, prominent hallucinations, parkinsonism, and fluctuations in attention and alertness. Unexplained falls, delusions, passing out, and sensitivity to drugs can support the diagnosis of DLB. The latter issue is important when determining appropriate drug treatment for psychosis, and there is data to suggest that these persons may be more responsive to cholinesterase inhibitors or Aricept (donepezil) type drugs.

Vascular disease often coexists with AD and other dementias, but certainly can occur as the primary cause for cognitive impairment. Vascular dementia due to strokes is the most common clinical diagnosis and is characterized by an acute cognitive decline temporally related to an acute cerebrovascular event. The history of an acute-onset or stepwise decline in cognition, and evidence of strokes by neuroimaging, is generally sufficient for the diagnosis of vascular dementia. The presence of infarcts on brain imaging alone, however, is insufficient for the diagnosis since infarcts often coexist with other dementias. Frontotemporal dementia is less common, but should be considered if early loss of personal and social awareness, hyperorality, and pronounced language dysfunction are observed, especially in persons less than 70 years of age.

Dementia is a neurodegenerative disease characterized by cognitive impairment and inability to live independently. Dementia is usually characterized by conditions that are chronic, irreversible, and progressive for example Alzheimer's disease, Vascular dementia, Dementia with Lewy body, and Frontotemporal dementia. A subset of dementias has an acute or subacute onset and can be reversible if diagnosed and treated promptly. These subsets of dementia are classified as Rapidly Progressive Dementias.

Rapidly progressive dementias (RPD's) are conditions that usually cause dementia over weeks or months, although there is no formal definition for these dementias that result in a life expectancy less than 1-2 years from the onset of the illness. Differentiating RPD's from the usual chronic, progressive dementia can be difficult. The prognosis of RPD's is variable comparing to the chronic progressive dementias. RPD can be caused by irreversible/fatal diseases like Creutzfeldt-Jakob Disease caused by a prion or viral like particle. One new variant of CJD is transmitted by ingesting tainted beef, which is very rare but has received some press and study in the literature. The diagnostic work up in majority of cases requires combining clinical findings with laboratory testing, spinal tap or fluid analysis, electroencephalogram (EEG) and neuroimaging testing (MRI). There is no treatment for CJD, but it is an unlikely diagnosis for any patient with a slow progression and with disease symptoms for more than two years.