

An Editorial Note on Alzheimer's Disease

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Editorial

Alzheimer's disease is a progressive neurologic disorder that causes brain cells to die and the brain to shrink (atrophy). Alzheimer's disease is the most common cause of dementia, which is defined as a progressive decline in cognitive, behavioural, and social skills that impairs a person's ability to function independently.

Alzheimer's disease affects approximately 5.8 million people in the United States aged 65 and up. Eighty percent of those are 75 or older. Alzheimer's disease is estimated to affect 60-70 percent of the approximately 50 million people worldwide who have dementia.

The disease's early symptoms include forgetting recent events or conversations. A person with Alzheimer's disease will develop severe memory impairment and lose the ability to perform daily tasks as the disease progresses.

Medications may improve or slow the progression of symptoms temporarily. These treatments can sometimes help people with Alzheimer's disease maintain function and independence for a short period of time. Various programmes and services are available to help people with Alzheimer's disease and their caregivers.

There is no cure for Alzheimer's disease or treatment that alters the disease process in the brain. Complications from severe loss of brain function, such as dehydration, malnutrition, or infection, result in death in advanced stages of the disease.

Signs and symptoms

Memory problems are frequently one of the first signs of Alzheimer's-related cognitive impairment. Mild cognitive impairment is a condition that affects some people who have memory problems (MCI). People with MCI have more memory problems than is typical for their age, but their symptoms do not interfere with their daily lives. MCI has also been linked to difficulties with movement and the sense of smell. Older people with MCI are more likely to develop Alzheimer's disease, but not all of them do. Some people may even regain normal cognition.

The first signs of Alzheimer's disease differ from person to person. For many people, a decline in non-memory aspects of cognition, such as word-finding, vision/spatial issues, and impaired reasoning or judgement, may indicate the disease is in its early stages. Biomarkers (biological signs of disease found in brain images, cerebrospinal fluid, and blood) are being studied by researchers to detect early changes in the brains of people with MCI and cognitively normal people who may be at higher risk for Alzheimer's. More research is needed before these techniques can be used widely and routinely to diagnose Alzheimer's disease in the office of a health care provider.

Stages of Alzheimer's disease

Mild Alzheimer's disease: As Alzheimer's disease progresses, people suffer from increased memory loss and other cognitive difficulties. Wandering

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Received 05 November, 2021; **Accepted** 10 November, 2021; **Published** 15 November, 2021

and getting lost are examples of problems, as are difficulties handling money and paying bills, repeating questions, taking longer to complete normal daily tasks, and changes in personality and behaviour. People are frequently diagnosed at this stage.

Moderate Alzheimer's disease: Damage occurs in areas of the brain that control language, reasoning, conscious thought, and sensory processing, such as the ability to detect sounds and smells correctly, during this stage. Memory loss and confusion worsen, and people have difficulty recognising family and friends. They may be unable to learn new things, complete multi-step tasks such as dressing, or deal with new situations. Furthermore, people at this stage may experience hallucinations, delusions, and paranoia, as well as act rashly.

Severe Alzheimer's disease: Plaques and tangles eventually spread throughout the brain, causing brain tissue to shrink significantly. People with severe Alzheimer's disease are unable to communicate and are completely reliant on others for care. As the body shuts down near the end of life, the person may spend most or all of his or her time in bed.

Diagnosis

Doctors use a variety of methods and tools to help determine whether a person suffering from memory loss has Alzheimer's disease.

Doctors may use the following methods to diagnose Alzheimer's disease:

- Inquire about the person's overall health, use of prescription and over-the-counter medications, diet, previous medical problems, ability to carry out daily activities, and changes in behaviour and personality.
- Perform memory, problem-solving, attention, counting, and language tests.
- Standard medical tests, such as blood and urine tests, should be performed to rule out any other possible causes of the problem.
- Brain scans, such as Computed Tomography (CT), Magnetic Resonance Imaging (MRI), or Positron Emission Tomography (PET), can be used to confirm an Alzheimer's diagnosis or rule out other possible causes of symptoms.
- These tests may be repeated to provide doctors with information on how a person's memory and other cognitive functions change over time.

People who have memory or thinking problems should consult their doctor to determine whether their symptoms are caused by Alzheimer's disease or another cause, such as a stroke, tumour, Parkinson's disease, sleep disturbances, medication side effects, an infection, or another type of dementia. Some of these conditions are potentially treatable and reversible.

If Alzheimer's is diagnosed, starting treatment as soon as possible in the disease process may help preserve daily functioning for a while. An early diagnosis also assists families in making long-term plans. They can handle financial and legal issues, address potential safety concerns, learn about living arrangements, and form support networks.

Furthermore, an early diagnosis gives people more opportunities to participate in clinical trials or other research studies testing potential new Alzheimer's treatments.

How to cite this article: Cardona, Albert. "An Editorial Note on Alzheimer's Disease." *J Health Med Informat* 12 (2021): 391.