

## The Effect of the COVID-19 on Alzheimer's Disease

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**Abstract :** Alzheimer's Disease (AD) is counted as one of the most important global health problems and the main cause of dementia. The term dementia refers to a wide spectrum of disorders characterized by global, chronic, and generally irreversible cognitive deterioration. It is estimated that %60 % to 80 of the cases of dementia are because of AD. Alzheimer's is a slowly progressive brain disease. The reason for AD is unknown to the author's best knowledge, yet it is one of the topics that is most researched. AD shows the histopathologically abnormal accumulation of the protein beta-amyloid (plaque) outside neurons and twisted strands of the protein tau (tangles) inside neurons in the brain. These changes are accompanied by damage to the brain tissue and the death of neurons. AD causes people to have difficulty remembering names or conversations. Some of the later symptoms are difficulty in talking and walking. Alzheimer's Disease is elevated by the illness and mortality of COVID-19. COVID-19 has affected many lives globally and had profound effects on human lives. COVID-19 is caused by SARS-CoV-2, which is a virus that attacks the respiratory and central nervous system and has neuroinvasive potential. More than %80 of COVID-19 patients have ageusia or anosmia, representing the pathognomic features of the disease. Patients with dementia are frail, and with the COVID-19 pandemic, including isolation, cognitive decline may exacerbate. Furthermore, patients with AD can be unable to follow the directions, such as covering their mouth and nose while coughing and can live in nursing homes which makes them more open to being infected. As COVID-19 is highly infectious and its management requires isolation and quarantine, the need for caregivers for AD management conflicts with that of COVID-19 and adds an extra burden on AD patients, caregivers, families, society, and the economy. Due to the entry of SARS-CoV-2 into the central nervous system, inflammation caused by COVID-19, prolonged hospitalization, and delirium, it has been reported that COVID-19 causes many neurological disorders and predisposition to AD.

**Keywords :** Alzheimer's disease, COVID-19, dementia, SARS-CoV-2

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