

Alzheimer's Disease

Shantaram Khanage¹ and Chetana Bedwal²

Rashtriya College of Pharmacy, Hatnoor, Kannad, Chh. Sambhajinagar, India^{1,2}

Abstract: *Alzheimer's disease (AD) is a degenerative disorder of the nervous system that progresses over time, leading to cognitive decline, impairment in daily activities, and behavioral changes. It is recognized as the most prevalent form of dementia in both early-onset and late-onset cases. According to estimates by the World Health Organization (WHO), approximately 5% of men and 6% of women over the age of 60 worldwide are affected by this condition. AD initially manifests as subtle memory lapses that are often overlooked but progressively worsen, ultimately leading to significant disability. Current treatment options, such as acetylcholinesterase inhibitors (e.g., rivastigmine, galantamine, donepezil) and NMDA receptor antagonists (e.g., memantine), provide only limited benefits, focusing on symptom management rather than addressing the root cause of the disease. Despite an improved understanding of the neuropathological features of AD, the underlying mechanisms remain elusive, hindering the development of effective preventative or curative therapies. Recent advancements in pathophysiological research have identified potential therapeutic targets, offering hope for interventions that could address the disease process more directly. Expanding knowledge of AD and its management is crucial for enhancing patient care and reducing associated costs. This article reviews recent advancements in understanding and treating Alzheimer's disease.*

Keywords: Alzheimer's disease, dementia, therapeutic strategies, neurodegeneration, cognitive decline, disease management