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Alzheimer's Disease as Silent Killer of Memory: Current Drug Targets and Management

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ABSTRACT

Alzheimer's disease is one of the most devastating brain disorders of elderly humans. Alzheimer's disease (AD), the most common cause of dementia, is characterized by two major pathological hallmarks: amyloid plaques and neurofibrillary tangles. Presently, AD is the major neurological burden affecting nearly 4.5 per cent of population worldwide with more prevalence to old age persons. Based on these two major pathological hallmarks, an amyloid cascade hypothesis was proposed, and accordingly current therapeutic approaches are now focused as therapeutic intervention against synthesis or clearance of β -amyloid peptides A β from the brain. Additionally, from the previous few years some drugs have been targeted for blocking tau hyper phosphorylation and aggregation have been suggested. Symptomatic treatment mainly focusing on cholinergic therapy has been clinically evaluated by randomized, placebo controlled, double blind, parallel group studies measuring performance-based test of conjunctive function, activities of daily living and behaviour. Current on-going therapies may provide a symptomatic benefit, but do not treat the progression of disease. Present investigations rely on understanding the contributing mechanisms and finding neuropathological hallmarks of AD. Therapeutic approaches targeting senile plaques or neurofibrillary tangles have not yet resulted in a significant cognitive improvement. This literature review aims at summarizing the recent advances and at highlighting the most promising results of the on-going research as successful tool to halt AD.

Keywords: Alzheimer's disease, Neurofibrillary, Amyloid, plaques, Dementia, neurological, plaque, pathological

