

## An Overview on the Mild Cognitive Impairment and Its Progression to Alzheimer's Disease

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### DESCRIPTION

Mild Cognitive Impairment (MCI) is a complicated clinical entity characterized by severe deficiencies in attention, learning, memory, processing speed, and semantic language, and it serves as a transitional condition between normal ageing and Alzheimer's Disease (AD). This condition can lead to dementia, most particularly in Alzheimer's disease. In the 60 to 84-year-old population, the prevalence of MCI ranges from around 6.7 percent to 25.2 percent. Each year, 10.5 out of every 100 persons in Asia aged 60 and above progresses MCI. Alzheimer's Disease (AD) is the most prevalent type of dementia, accounting for almost 60% to 70% of cases, and the global incidence of dementia is predicted to double every 20 years, from 46.8 million in 2015 to 131.5 million in 2050 mostly in low and middle income countries.

China presently has more than 10 million dementia patients, making the country with the greatest number of patients in the world. Every year, 16% of MCI patients acquire dementia, and the development of MCI to dementia is associated with poor treatment results as well as a significant financial burden on families and society. As a result, it is critical to successfully prevent and stop the development of MCI to AD. Slowing or even reversing the course of MCI may allow for earlier intervention and, eventually, prevention of AD. Cholinesterase inhibitors (e.g., donepezil, rivastigmine, galantamine) have been approved by the US Food and Drug Administration for the treatment of mild to moderate Alzheimer's disease. These medications have also been tried in clinical trials to treat MCI; however, they are ineffective in MCI and does not prevent the onset of dementia. Although studies have indicated enhanced semantic memory in a MCI patients treated with inotropic glutamate receptor antagonists (meantime), more data is needed to support this, and the benefits and drawbacks of pharmacological therapy of MCI are still being challenged. The

Asian Clinical Expert Group on Neurocognitive Disorders approved to include EGb761, a Ginkgo biloba extract, in the treatment of MCI due to its positive efficiency and safety profile.

EGB761VR is the primary pharmacological therapy suggested in the current recommendations for the symptomatic treatment of MCI and has been licenced in numerous EU countries. Chinese medicines have showed tremendous potential in the prevention and treatment of cognitive impairment in recent years. Diet and dietary supplements have been proven in studies to play a beneficial synergistic impact in reducing cognitive impairment, and exercise may moderate the pace of cognitive decline in MCI. Herbal medications, in addition to standard pharmaceuticals such as cholinesterase inhibitors and ionotropic glutamate receptor antagonists, have been widely employed in clinical practise in China. Calcium channel blockers nimodipine, piracetam, aniracetam, and olanzapine, on the other hand, are used synergistically with the above medications to enhance cognitive performance.

Professor Marshal Folstein created the Mini Mental State Examination (MMSE) in 1975 as a practical technique for physicians to evaluate cognitive status. It comprises temporal orienting force, place orientation, immediate memory, attention and processing, delayed memory, language, and visual-spatial. Another question is a brief exam that takes 7 to 10 minutes to complete and is still the most thoroughly researched instrument available today. The most often used outpatient screening tool, although the Montreal Cognitive Assessment (MCA) has been demonstrated to be more sensitive in screening and diagnosing MCI than the MMSE, both tests are accurate in the diagnosis of AD. The transfer from the MCI stage to dementia can be better anticipated by examining how the MMSE evolves over time rather than a single assessment, although it is usually used in combination with other outcome measures to increase the accuracy of the diagnosis of MCI.

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