Alzheimer's Disease: What's on the Horizon?

*Farha A

Alzheimer's disease begins with the biological process in the brain that includes the appearance of a buildup of proteins in the form of amyloid plaques and neurofibrillary tangles. This disease causes brain cells to die over time and the brain to shrink as a result dementia occurs. The symptoms of Alzheimer's disease includes-forget about recent conversations or events, misplace items, forget the names of places and objects, have trouble thinking of the right word, ask questions repetitively, show poor judgement or find it harder to make decisions, become less flexible and more hesitant to try new things.[1]

In 2021, around 57 million people had dementia worldwide. Over 60% of whom live in low-and middle-income countries. Every year, there are nearly 10 million new cases are added. According to WHO, over 7 million Americans have Alzheimer's. An estimated 7.2 million Americans age between 65 and older are living with Alzheimer's in 2025. Among them 74% are age 75 or older and about 1 in 9 people age 65 and older (11%) has Alzheimer's.[2]

Prevention of Alzheimer's disease includes-stopping smoking, keeping alcohol to a minimum, eating a healthy, balanced diet, including at least 5 portions of fruit and vegetables every day. There is currently no definite cure for Alzheimer's disease, but some treatments are available to help manage symptoms and potentially slow the progression of the disease. These treatments include- medications, therapies, and lifestyle adjustments. The caregiver should respect the person's personal space, build quiet times into the day along with activities, keep well-loved objects and photographs around the house to help the person feel more secure.[3]

Recent reports in Alzheimer's disease includes advancements in drug development, diagnostic tools and research into potential causes and treatments. A disease-modifying drug named Lecanemab has been approved in the EU and UK for early-stage Alzheimer's. Research continues on new drug trials like donanemab and potential treatments targeting amyloid plaques and tau tangles. Blood-based biomarkers are also being explored for more accurate and efficient diagnosis.[4]

References

1. Verghese, P. B., Castellano, J. M. & Holtzman, D. M. Apolipoprotein E in Alzheimer's disease and other neurological disorders. Lancet Neuro. 2011;10:241–252.
2. Koutsodendris, N., Nelson, M. R., Rao, A. & Huang, Y. Apolipoprotein E and Alzheimer's Disease: Findings, Hypotheses, and Potential Mechanisms. Annu. Rev. Pathol. 2022;17:73–99.
3. Serrano-Pozo, A., Das, S. & Hyman, B. T. APOE and Alzheimer's disease: advances in genetics, pathophysiology, and therapeutic approaches. Lancet Neurol. 2021; 20:68–80.
4. Troutwine, B. R. et al. Apolipoprotein E and Alzheimer's disease. Acta Pharm. Sin. B. 2025; 12:496–510.

**Dr. Anika Farha, Assistant Professor (CC), Department of Community Medicine, Dinajpur Medical College, Dinajpur. anikafarhabidita@gmail.com*

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