

34. **THE COMPARATIVE EFFICACY OF ANTI-AMYLOID AND NON-ANTIAMYLOID DRUGS FOR TREATMENT OF ALZHEIMER'S DISEASE: A NETWORK META-ANALYSIS**

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<https://www.youtube.com/watch?v=vlsNiqV1-28&t=4446s>

BACKGROUND: Alzheimer's disease is a degenerative neurological disorder that contributes 60-80% of all dementia cases, typically occurring at the age of 65 years. Currently available therapeutics for treatment are only capable of limiting the progression of cognitive decline. The focus of many Alzheimer's disease drug therapies involves the hypothesized cause of pathogenesis in the disease, beta protein in the brain. Based on the Preferred Reporting Items for Meta-Analysis (PRISMA) for Network Meta-Analyses (NMA) framework, the present study was conducted to compare the efficacy of such drugs that target beta-amyloid directly or indirectly, with that of other treatments studied in randomized controlled trials. **METHODS:** Utilizing a network meta-analysis, direct and indirect comparisons between interventions could be done, providing a ranking of intervention in terms of efficacy in treating cognitive symptoms of Alzheimer's disease. **RESULTS:** A total of 33 studies were included in four analyses of intervention trials that reported cognitive outcomes measured by Alzheimer's Disease Assessment Scale-Cognitive Subscale (ADAS-cog) or Mini-Mental State Examination (MMSE) score. Based on the findings, anti-amyloid agents did not show a marked advantage over other therapies in improving cognitive scores. Results showed that parasympathomimetic agents were consistently ranked higher in terms of Surface Under the Cumulative Ranking (SUCRA) score, with anti-tau agents providing a possible superiority over all other interventions at improving MMSE scores for treatments lasting longer than 24 weeks. High-dose anti-amyloid therapies were effective at improving MMSE score in short term treatments lasting not more than 24 weeks but fall behind other drugs in longer durations. **CONCLUSION:** For better understanding on the choice of anti-amyloid and non-anti-amyloid therapies, future well-designed large studies including safety outcome and cost-benefit analyses on the different interventions are recommended. Additionally, anti-tau therapies show a clearer potential over anti-amyloid therapies and should thus be given more focus in future drug research.

Key words: Alzheimer's Disease; Amyloid Beta; Network Meta-Analysis; Randomized Controlled Trial (Source: MeSH-NLM).