

Treatment with Beta-Amyloid Targeting Monoclonal Antibodies Improves Cognitive Function in a Patient with Alzheimer's Disease

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Highlights

- The study provides real-world clinical experience with sequential anti-A β monoclonal antibody therapy.
- Following anti-A β monoclonal antibody therapy, a dissociation may occur between biomarkers and clinical outcomes.
- The therapeutic effects of different monoclonal antibody drugs also exhibit variations in the individual patient.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
With the approval of lecanemab and donanemab, the treatment of AD has entered the era of disease modifying therapy. Lecanemab and donanemab are monoclonal antibodies targeting beta-amyloid protein(Aβ), but their mechanisms are different. Both can effectively clear amyloid plaques in the brain and delay the progression of AD. Despite these advances, real-world clinical experience with sequential anti-Aβ monoclonal antibody therapy remains extremely limited.	We report a patient with bio-marker-confirmed AD who showed divergent cognitive and amyloid imaging trajectories after transitioning from lecanemab therapy to donanemab. The patient is a 66-year-old female with a bachelor's degree. Since August 2023, she has been using lecanemab regularly with intravenous infusion every fortnight. By March 2025, a total of 38 doses had been administered. In April 2025, the patient began to switch to donanemab and received intravenous infusion once a month.	During lecanemab therapy, the patient's cognition improved. After switching to donanemab, the cognition deteriorated, with declining scores on neuropsychological scales. Aβ PET scan showed a Centiloid value of 38.59, indicating substantial clearance of Aβ deposits. In addition, the patient underwent multiple cranial MRI scans during treatment, and no ARIA were detected. After communication with the patient and her family, it was decided to switch back to lecanemab therapy after passing the donanemab washout period.	This study presents clinical observation of divergent short-term cognitive outcomes in AD following a switch from lecanemab to donanemab therapy. These findings underscores the complexity of AD treatment and highlights the dissociation that may occur between clinical outcomes and amyloid burden reduction. In future, biomarker-based precision stratification, and comparative studies will aid in selecting the most appropriate disease modifying therapies for patients.	Alzheimers Dement. 2023 Expert Rev Neurother. 2019 Mol Psychiatry. 2021 Alzheimers Res Ther. 2021 JAMA. 2023 Brain. 2023  南京鼓楼醫院 南京大学医学院附属鼓楼医院 Nanjing Drum Tower Hospital The Affiliated Hospital of Nanjing University Medical School  ALZHEIMER'S ASSOCIATION 