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BEHAVIORAL VARIANT OF ALZHEIMER'S DISEASE: AN ATYPICAL CASE SUPPORTED BY CSF BIOMARKERS

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OBJECTIVE: Alzheimer's disease(AD) is the most common cause of dementia and is typically characterized by progressive memory loss.However, behavioral variant AD(bvAD) is a rare clinical subtype that manifests with prominent behavioral symptoms and executive dysfunction.This variant is often confused with the bvFTD.Neuropsychological assessment, imaging techniques, and CSF biomarkers play a crucial role in diagnosis.This presentation discusses a case highlighting the importance of biomarkers in the diagnosis of bvAD.

CASE: A 73-year- old-female patient presented to our clinic in October-2024 with symptoms of irritability, forgetfulness, inappropriate social behaviors, and food hoarding.Her daughter reported that, over the past year, the patient had been giving her phone number to strangers and inviting them home, engaging in socially inappropriate speech, mistaking olives for raisins and boiling them, and collecting bird food in the house.Before these symptoms, she had no history of such behaviors, but she had begun experiencing increasing difficulties in remembering dates, forgetting names, and exhibiting short-term memory loss, especially in the last six months.Neuropsychological evaluation revealed MMSE:19/30, CDT:2/5, and FAB:10/18. Brain MRI showed medial temporal atrophy classified as stage 2(MTA2).Brain PET imaging demonstrated reduced glucose metabolism in the left medial temporal lobe (Z-score:-3.48). CSF analysis revealed elevated phosphorylated-Tau181(41.66pg/ml), increased total-Tau(475pg/ml), elevated phosphorylated-Tau181/AmyloidBeta42 ratio(0.0369), and increased total- Tau/AmyloidBeta42 ratio(0.4207).These CSF biomarkers provided neuropathological support for the diagnosis of bvAD.During follow-up, the patient's treatment regimen was adjusted to sertraline200mg/day, trazodone50mg/day, donepezil10mg/day, and memantine20mg/day.Verbal informed consent for the case presentation was obtained from the patient and her relatives.

DISCUSSION: This case demonstrates that bvAD can be mistaken for other neurodegenerative disorders.CSF biomarkers enhance diagnostic accuracy.While MTA and increased total-Tau/AmyloidBeta42 ratio are indicative of typical AD, the lateralized PET findings, behavioral symptoms, and frontal lobe dysfunction suggest atypical variant.The use of advanced biomarkers, such as CSF analyses, plays a critical role in the accurate diagnosis and management of atypical cases.

Keywords: Behavioral variant Alzheimer's disease, CSF biomarkers, frontotemporal dementia.