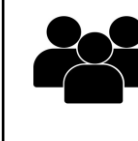


Case Study: Diagnostic overlap between Behavioural-Variant Frontotemporal Dementia & Frontal-Variant Alzheimer’s Disease

Jillian Terese Teo | PhD (Clinical Psychology)
Department of Psychology, National Neuroscience Institute, Singapore
Registered Psychologist (Singapore); AHPRA Registered Psychologist (Australia)

Introduction	Methods	Results	Conclusion																		
Frontal lobe dysfunction is common in neurodegenerative disorders and can result in a range of cognitive, behavioural, and emotional changes. Frontal-variant Alzheimer’s disease (fvAD) and behavioural-variant frontotemporal dementia (bvFTD) share overlapping early clinical features, including: - Executive dysfunction - Personality & Behavioural changes <table><tr><th colspan="3">Key Differences</th></tr><tr><th>Domain</th><th>fvAD</th><th>bvFTD</th></tr><tr><td>Memory</td><td>Early memory complaints</td><td>Late memory complaints</td></tr><tr><td>Language</td><td>Phonemic & semantic paraphasias</td><td>Loss of socioemotional aspects of speech</td></tr><tr><td>Personality changes</td><td>Agitation and irritability</td><td>Apathy, disinhibition, loss of empathy</td></tr><tr><td>Symptom progression</td><td>Memory impairment → Executive dysfunction with behavioural changes</td><td>Behavioural changes first → Executive dysfunction → Language disturbances</td></tr></table> Differentiation is particularly challenging when the sequence of symptom onset is unclear, especially in individuals with high cognitive reserve whose neuropsychological profiles may appear preserved despite evidence of functional decline.	Key Differences			Domain	fvAD	bvFTD	Memory	Early memory complaints	Late memory complaints	Language	Phonemic & semantic paraphasias	Loss of socioemotional aspects of speech	Personality changes	Agitation and irritability	Apathy, disinhibition, loss of empathy	Symptom progression	Memory impairment → Executive dysfunction with behavioural changes	Behavioural changes first → Executive dysfunction → Language disturbances	Case study 61-year-old female University graduate Professional career in the Finance industry Referral reason: Neuropsychological assessment due to cognitive complaints reported by family members. Assessments - Repeatable Battery for the Assessment of Neuropsychological Status (RBANS), Form A - Frontal Assessment Battery (FAB) - Delis-Kaplan Executive Function System (DKEFS): Trail Making, Colour-Word Interference, Verbal Fluency - Wechsler Adult Intelligence Scale – Fourth Edition (WAIS-IV): Block Design - Lawton-Brody Instrumental Activities of Daily Living Scale (IADL) - Depression Anxiety Stress Scales (DASS-21) - Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) Clinical interview, behavioural observations, collateral information from husband & daughter, and MRI Brain were also integrated into diagnostic formulation.	 Neuropsychological Profile - Broadly intact cognitive performance - Subtle decline in visual and verbal memory - Mild executive functioning inefficiencies: cognitive flexibility, organisation, and self-monitoring - Interference on Go/No-Go tasks (FAB) - Reduced frustration tolerance on number sequencing tasks (DKEFS)  Behavioural observations Elaborate and tangential Limited insight Defensive when challenged  Informant and self-reported concerns Patient: No perceived cognitive difficulties Husband & daughter: - Progressive memory decline - Increased emotional lability and irritability - Apathy, disinhibition, and diminished social interest - Socially inappropriate behaviour and remarks at a funeral  MRI Brain Global involutational change with bilateral frontal and right temporal lobe predominance appears advanced for age. Asymmetric hippocampal atrophy, worse on the right.	This case highlights: ✓ Diagnostic overlap between early fvAD & bvFTD ✓ Subtle decline in memory with prominent executive and behavioural disturbance raises consideration of fvAD, while reduced insight and personality change also overlap with bvFTD. ✓ Performance on standard neuropsychological tests may appear relatively preserved despite evidence of functional decline & changes on neuroimaging. ✓ Comprehensive assessment should integrate cognitive testing with detailed informant history and behavioural observations rather than test scores alone. ✓ Longitudinal follow-up with repeat neuropsychological assessment, neuroimaging, and biomarker testing is essential for diagnostic clarification. ✓ Future assessments could incorporate additional tests such as structured behavioural and social cognition measures to better characterise and monitor changes.
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Contact: jillian.terese.teo@nni.com.sg