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Prognostic importance of apathy in syndromes associated with frontotemporal lobar degeneration

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Study objective and summary result

This study tested the hypothesis that the neurobehavioral components of frontotemporal lobar degeneration (FTLD) syndromes are predictors of survival, and it found that apathy predicts mortality in FTLD syndromes.

What is known and what this paper adds

The various FTLD syndromes vary considerably in terms of survival rates, and research to identify the determinants of mortality in FTLD syndromes is ongoing. This study provides evidence for neurobehavioral factors being determinants of mortality across FTLD syndromes.

Participants and setting

This study analyzed data from 124 patients with FTLD syndromes (50% female; mean baseline age, 69.3 ± 8.4 years), of whom 35 had progressive supranuclear palsy (PSP), 29 had corticobasal syndrome (CBS), 33 had primary progressive aphasia (PPA), and 27 had behavioral-variant frontotemporal dementia (bvFTD). These patients participated in the Pick Disease and PSP Prevalence and Incidence (PiPPIN) study, a prospective cohort study that was conducted in the UK.

Design, size, and duration

The PiPPIN study participants underwent baseline neuropsychological and behavioral assessments that focused on apathy, impulsivity, and behavioral changes. Mortality data were acquired from the records of the UK National Health Service. This study used logistic regression models to identify predictors of mortality within 30 months of the baseline assessments.

Main results and the role of chance

Death within 30 months of the baseline assessments was observed for 50 patients, of whom 21 had PSP, 15 had CBS, 5 had PPA, and 9 had bvFTD. A neuropsychological profile prominently involving apathy was associated with an increased risk of mortality ($p = 0.004$).

Table Neuropsychological profiles associated with 30-month mortality outcomes

Neuropsychological profile	Odds ratio (95% confidence interval) for 30-mo mortality
Apathy	2.912 (1.396–6.075)
Reward-insensitivity and behavioral inhibition	0.509 (0.270–0.960)

Bias, confounding, and other reasons for caution

Clinical diagnostic criteria were used for diagnosis, not neuropathology.

Generalizability to other populations

The PiPPIN study's participants were predominantly white, and patients with severe impairments might have been underrepresented. These factors may limit the generalizability of the results.

Study funding/potential competing interests

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A draft of the short-form article was written by M. Dalefield, a writer with Editage, a division of Cactus Communications. The authors of the full-length article and the journal editors edited and approved the final version.

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