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Saturday

Developing the neuropsychiatric and motor components of clinical rating scales in frontotemporal dementia

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State of the art
Existing frontotemporal dementia (FTD) clinical rating scales do not include the assessment of neuropsychiatric or motor symptoms, which are widely known to be present within the FTD spectrum.

Methodology
832 participants from the GENFI study were recruited: 522 mutation carriers (221 *C9orf72*, 213 *GRN*, and 88 *MAPT*), and 310 mutation-negative controls. All participants were assessed using the Clinical Dementia Rating (CDR) Dementia Staging Instrument as well as the additional National Alzheimer's Coordinating Center FTLD behavioural and language modules (CDR® plus NACC FTLD). They were also assessed using novel neuropsychiatric and motor components, with a new CDR® plus NACC FTLD-NM scale generated. For behaviour, language, neuropsychiatric and motor symptoms we compared using a single overall score for each component with an algorithm-generated score, made from combining scores of multiple individual symptoms within that domain (CDR® plus NACC FTLD-NMI-10).

Results
Using the new scales, more asymptomatic individuals (score 0) were scored as prodromal (score 0.5) when compared to the original CDR® plus NACC FTLD: CDR® plus NACC FTLD-NM: 2%; CDR® plus NACC FTLD-NMI-10: 9%. Furthermore, using the original CDR® plus NACC FTLD resulted in some individuals with a clinical diagnosis of an FTD spectrum disorder being scored as 'asymptomatic' (2% bvFTD, 18% ALS/FTD-ALS, 20% parkinsonism) but this was not the case with either of the new scales where no individuals scored 0.

Conclusion
Factoring in all symptoms within the wide spectrum of disease in FTD is important to ensure individuals are appropriately staged for future clinical trials.

Conflicts of interest

No conflict of interest.