Neuropsychiatric changes precede classic motor symptoms in ALS and do not affect survival

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Objectives: To investigate patient susceptibility to neuropsychiatric symptoms in the context of progression of more classic motor symptoms in amyotrophic lateral sclerosis (ALS) and to examine the impact of neuropsychiatric symptoms on survival. Methods: The study cohort consisted of 219 patients with ALS (limb onset 5 159; bulbar onset 5 60), with neuropsychiatric symptoms measured using the Motor Neuron Disease Behavioural Scale and more classic ALS symptoms assessed by the Amyotrophic Lateral Sclerosis Functional Rating Scale-Revised. For detection of symptom susceptibility (neuropsychiatric vs classic motor), a Rasch analysis was applied (n 5 219). Cox proportional hazard regression models were used for the survival analysis (n 5 115 patients), which incorporated neuropsychiatric and classic motor symptoms. Results: Rasch analysis demonstrated that neuropsychiatric symptoms appeared earlier than classic motor features of ALS. However, differences in neuropsychiatric scores did not