Deficits in emotion recognition as markers of frontal behavioral dysfunction in amyotrophic lateral sclerosis

Martins, Aldrin Pedroza
De Godoy Rousseff Prado, Laura
Lillo, Patricia
Mioshi, Eneida
Teixeira, Antônio Lúcio
De Souza, Leonardo Cruz

Objective: Amyotrophic lateral sclerosis (ALS) is a neurodegenerative disease with prominent motor symptoms. Patients with ALS may also manifest frontal behavior symptoms and cognitive decline, including impairment in facial emotion recognition. The authors aimed to investigate whether deficits in emotion recognition were associated with frontal behavior symptoms in ALS. Methods: Participants were patients with probable or definite sporadic ALS (N=21; male:female ratio, 11:10; median age, 62 years; median disease duration, 3 years) and agematched and education-matched healthy control subjects (N=25; male:female ratio, 14:11; median age, 61 years). The Facial Emotion Recognition Test (FERT) was administered to all participants. Patients with ALS were assessed using the Cambridge Behavior Inventory-Revised and were classified into two groups according to the presence of frontal behavioral symptoms: ALS with no behavioral symptom (ALSns; N=9) and ALS with at least one behavioral symptom (ALSbs; N=12). Results: Apathy and mood symptoms were the most frequent neuropsychiatric symptoms in the patient group. Patients with ALS performed worse than control subjects in the recognition of sadness (p<0.004). There were no differences between control subjects and patients in the ALSns group in all FERT scores, but the ALSbs group had lower performance than control subjects in sadness (p<0.003). Conclusions: Emotion recognition deficit may be a marker of frontal behavior in ALS.