# Title

## *Parasympathetic cardiac dysautonomia in amyotrophic lateral sclerosis patients; [Disautonomía cardíaca parasimpática en pacientes con esclerosis lateral amiotrófica]*

## Abstract

Introduction: Although some studies have shown the presence of cardiac dysautonomia in amyotrophic lateral sclerosis (ALS) patients, its relationship with the disease is still controversial. Objective: To explore cardiac dysautonomia in ALS and its possible association with disease evolution and patient's quality of life. Materials and methods: We evaluated demographics and disease-related variables, comorbidities and quality of life in 20 ALS patients. We performed the autonomic symptoms profile and SF-36 (quality of life) scales. Patients were also evaluated with dynamometry, orthostatic testing and RR interval variability (RRIV) in resting and deep breathing electrocardiograms. Twenty age- and gender- matched healthy individuals served as controls for autonomic cardiovascular measurements. Results: The mean age of ALS patients was 52 ± 14 years, 75% were male and 85% had spinal disease onset. The mean score as per the ALS-FRS and FVC were 25.65 ± 10.55 and 67% ± 21, respectively. Cardiac parasympathetic dysautonomia was found in 4 out of 17 (25%) ALS patients vs. none of the controls (P = 0.031). ALS patients with reduced RRIV did not differ statistically in any variably from those without. Only 1 patient (6%) vs. none of the controls had orthostatic hypotension (P = 0.18). Conclusion: Parasympathetic cardiac dysautonomia was observed in 25% of the ALS patients. Lack of association with epidemiological or ALS-related variables suggests a different pathological process. 

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