

Incidence of amyotrophic lateral sclerosis in Chile

Patricia Lillo ^{1 2 3}, Pedro Zitzko ⁴, Gladys Godoy-Reyes ^{1 5}, Gabriela Asenjo ⁶, David Sáez ^{1 5}, Gonzalo Cea ¹, Pamela Navarrete ¹, Daniel Valenzuela ^{1 5}, Ricardo Hughes ^{3 7}, Mark Heverin ⁸, Giancarlo Logroscino ⁹, Orla Hardiman ⁸

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- 1 Departamento de Neurología Sur, Facultad de Medicina, Universidad de Chile, Santiago, Chile.
- 2 Geroscience Center for Brain Health and Metabolism (GERO), Santiago, Chile.
- 3 Unidad de Neurología, Hospital San José, SSMN, Santiago, Chile.
- 4 Departamento de Salud Global, Escuela de Salud Pública, Universidad de Chile, Santiago, Chile.
- 5 Servicio de Neurología, Complejo Asistencial Barros Luco, Servicio de Salud Metropolitano Sur, Santiago, Chile.
- 6 Escuela de Salud Pública, Facultad de Medicina, Universidad de Chile, Santiago, Chile.
- 7 Servicio de Neurología, Hospital Clínico Universidad de Chile, Santiago, Chile.
- 8 Academic Unit of Neurology, Clinical Medicine, Trinity College Dublin, Dublin, Ireland, and.
- 9 Center for Neurodegenerative Diseases and the Aging Brain. Fondazione "Card. G. Panico" Department of Translational Biomedicine and Neuroscience (DiBraiN), University of Bari "Aldo Moro", Bari, Italy.

Abstract

Objective: This study aimed to estimate amyotrophic lateral sclerosis (ALS) incidence and survival rates in the Metropolitan region of Chile.

Methods: We conducted a cohort study of ALS cases in the Metropolitan Region from 2016 to 2019. A total of 219 ALS patients were recruited from Corporación ELA-Chile registry, in collaboration with neurologists from Sociedad de Neurología, Psiquiatría y Neurocirugía de Chile. We calculated incidence rates by sex and age and determined median survival from onset and diagnosis. Survival analysis used the Kaplan-Meier statistic, estimating hazard ratios for age, sex, time from symptom onset and from diagnosis using a Weibull regression model. All analyses were done using R 4.1.0.

Results: Overall, ALS diagnosis incidence was 0.97 cases per 100,000 inhabitants, peaking in the 70-79 age group and declining thereafter. The male-to-female ratio was 1.23. The median time to death from diagnosis was 2.3 years (95% confidence interval [CI]: 1.9-2.5), and from the first symptom, it was 3.1 years (95% CI: 2.8-3.5).

Conclusions: This is the first population-based study reporting ALS incidence and survival rates in Chile's Metropolitan region. Incidence resembled other Latin American studies. Median survival from diagnosis and from the first symptom were in line with previous findings. Our results corroborated lower ALS rates in Latin America, consistent with prior research.

Keywords: Amyotrophic lateral sclerosis; incidence; motor neuron disease; survival.