Role of nutritional and lifestyle factors on the Amyotrophic Lateral Sclerosis progression. Results from a multicenter cross-sectional study

*[1,2,3]Aliona Cucovici, [2,5]Andrei Ivashynka, [6]Andrea Fontana, [3,4]Vitalie Lisnic, [2]Maurizio A. Leone

[1]Department of Medical and Surgical Sciences, University of Foggia, 71122 Foggia, Italy
[2]Neurology Unit, Fondazione IRCCS Casa Sollievo della Sofferenza, 71013 San Giovanni Rotondo, Italy
[3]Department of Neuromuscular Diseases, *Diomid Gherman* Institute of Neurology and Neurosurgery
[4]Department of Neurology No 1, *Nicolae Testemitanu* State University of Medicine and Pharmacy Chisinau, the Republic of Moldova
[5]Department of Health Sciences, University of Eastern Piedmont, 28100 Novara, Italy
[6]Unit of Biostatistics, Fondazione IRCCS Casa Sollievo della Sofferenza, 71013 San Giovanni Rotondo, Italy

*Corresponding author – Aliona Cucovici. E-mail: aliona.cucovici@unifg.it

Abstract

Background: Amyotrophic Lateral Sclerosis is a devastating, untreatable motor neuron disease with unknown causes, but nutritional and lifestyle factors may play a role. To check this hypothesis, we conducted a multicentre cross-sectional study.
Material and methods: This study recruited 241 patients, 96 females, and 145 males; the mean age at onset – 59.9±11.8 years. According to El Escorial criteria, 74 patients were definite ALS, 77 – probable, 55 – possible, and 35 –suspected; 187 patients had spinal onset and 54 – bulbar. Patients were categorized into three groups, according to their ΔFS: slow (81), intermediate (80), and fast progressors (80).
Results: Current coffee consumers were 179 (74.3%), 34 (14.1%) were non-consumers, 22 (9.1%) – former consumers. The log-ΔFS was weakly correlated with the duration of coffee consumption (p=0.034), but not with the number of cup-years, or the intensity of coffee consumption (cups/day). Current tea consumers were 101 (41.9%), 6 (2.5%) were former-consumers, and 134 (55.6%) – non-consumers. The log-ΔFS was weakly correlated only with the consumption duration of black tea (p=0.028) but not with the number of cup-years. Current smokers were 44 (18.3%), former smokers – 10 (4.1%), and non-smokers – 187 (77.6%). The age of ALS onset was lower in current smokers than non-smokers, and the ΔFS was slightly, although not significantly, higher for smokers of >14 cigarettes/day. Current alcohol drinkers were 147 (61.0%), former drinkers – 5 (2.1%), and non-drinkers – 89 (36.9%). The log(ΔFS) was weakly correlated only with the duration of alcohol consumption (p = 0.028), but not with the mean number of drinks/day or the drink-years.
Conclusions: Our study does not support the hypothesis that coffee or tea consumption is associated with the ALS progression rate, possible minor role for smoking and alcohol drinking was suggested.
Key words: Amyotrophic Lateral Sclerosis, lifestyle factors.

Results of the cohort study of cognitive impairment associated with Parkinson's disease

Lilia Rotaru

Diomid Gherman Institute of Neurology and Neurosurgery, Chisinau, the Republic of Moldova

Corresponding author – Lilia Rotaru. E-mail: liliarotaru@yahoo.com

Abstract

Background: Cognitive impairment (CI) is frequent in Parkinson's Disease (PD), having particular features.
Material and methods: Sixty-five consecutive PD patients, (mean age 64.87 ± 7.69 y.o.; disease duration 50.21 ± 38.61 mo.; 48 women (43.2%), 63 men (56.8%)) underwent MoCA and Beck tests. Cognitive status was graded as: (1) normal and (2) impaired cognition.
Results: There were similar: ages (65.79 ± 7.13 vs 62.17 ± 12.21 y.o.), onset ages (61.44 ± 7.61 vs 57.00 ± 12.95 years), disease duration (49.63 ± 36.78 vs 66.00 ± 26.48) months, levodopa (574.58 ± 129 vs 249.55) and agonists doses (5.19 ± 3.02 vs 1.05 ± 0.05) and Beck scores (8.13 ± 6.21 vs 7.4 ± 3.85), in groups. CI was present in 59 (90.8%) patients; more frequent patients with cardiovascular risk factors (91.7% vs 80.0%, p > 0.05), symmetrical parkinsonism (41 pts (93.2%) vs 18 pts (85.7%), p > 0.05), and in first disease symptom bradykinesia patients (30 pts (93.8%) vs 23 pts (85.2%), p > 0.05). Upper / Lower Asymmetry Indexes (0.60 ± 0.37 vs 2.4 ± 0.97, p > 0.05) were lower in CI patients, all lower type patients (15 pts (100%) vs 18 pts (85.6%), p > 0.05) having CI. MoCA scores correlated with $UPDRS_{on}$ (r = -0.320, p <0.022), and red flags number (r = -0.590, p < 0.006).
Conclusions: CI is more expectable in akinetic, symmetric and lower type parkinsonism, also in patients with cardiovascular risk factors, with probable PD, and a more motor impairment.
Key words: cognitive impairment, Parkinson disease, cohort study.