Correlation between cognitive functions, balance and risk of fall in elderly with Alzheimer's dementia #75

Salma S. Soleman Hernandez[1], Flavia Gomes de Melo Coelho[2], Sebastião Gobbi[2], Florindo Stella[2,3].

[1] Senior Student of the Bachelor in Physical Education course, Instituto de Biociências, Universidade Estadual Paulista "Júlio de Mesquita Filho" – Unesp, Rio Claro, SP – Brazil; [2]Post Graduation Program in Motricity Science, Instituto de Biociências, Universidade Estadual Paulista "Júlio de Mesquita Filho" – Unesp, Rio Claro, SP – Brazil; 3Neuropsychiatry outpatient and Mental health of elderly people, Hospital das Clínicas, Universidade Estadual de Campinas,Campinas, SP – Brazil.
E-mail: salma@rc.unesp.br

The Alzheimer's dementia (AD) represents a clinical condition inherent to many chronic and neurodegenerative diseases that are usually related to a decline in the cognitive and physical functions. The objective of this research was to verify the correlation between cognitive functions, balance and risk of fall in elderly with AD when submitted to a systemized physical activity program. The sample consisted of 16 elderly divided in two groups: the Intervention Group (IG) n=9 77.7±7.5 years and the Control Group (CG) n=7 84.4 ± 6.1 years. Both groups were submitted to the tests: Mini Exam of the Mental State (MEEM); Berg's Balance Functional Scale (EEFB); Timed Up and Go test (TUG) and the Agility and Dynamic Balance from AAHPERD (AGILEQ). The IG was submitted to a systemized physical activity program during six months, three times a week in non consecutive days, the CG did not participate of the physical activity program, both groups had its pharmacological assistance maintained. The S*pearman* correlation was used to verify possible correlations between the analyzed variables, with a level of significance of 5%. The analysis pointed to a high correlation (r=0.85) between the cognitive functions and the balance at the CG, shown by the MEEM and the AGILEQ tests. Even with no he statistically significant evidences, we could notice that there was a moderate correlation between MEEM and TUG to the CG. The analysis of the IG did not show us a significant correlation between the analyzed variables. The physical activity program seems contribute with reduction of decline cognitive function and balance of elderly with AD, so may be an important non pharmacology approach of maintenance elderly with this disease front the progression of dementia.

Key words: motor approach; dementia; functional capacity, balance.