DUAL TASK AND CONTROL POSTURE IN PATIENTS WITH ALZHEIMER’S DISEASE


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Introduction: The performance of tasks executed concurrently in patients with Alzheimer's Disease (AD) is worse than in elderly without dementia. Such changes may partly explain the increased risk of falls in older people - a phenomenon three times more frequent in patients with AD compared with elderly without dementia.

Objective: To analyze the fluctuation of postural control to perform different tasks simultaneously in patients with AD.

Methods: Twenty-nine participants (78.2 ± 6.3 years) with clinical diagnosis of AD in mild and moderate levels of the disease. Cognitive function was assessed by Mini Mental State Examination (19.4 ± 3.7 points). The postural control was assessed by a force platform, under the following conditions:

1) gaze at a target at eye level of the individual and arms along the body,
2) First condition with concomitant cognitive task (counting starts at 30),
3) First condition holding a tray,
4) Third condition with concomitant cognitive task.

Results: The variable area of center of pressure (CoP) was analyzed using the Wilcoxon test (p < 0.05). The results showed a larger area of CoP for the second condition compared with condition 1 (z= -3.298, p=0.001), 3 (z=-4.371, p=0.001) and 4 (z=-2.489, p=0.013) respectively. When compared to condition 4, also showed a larger area of CoP under the conditions: 1 (z= -2.767, p=0.006) and 3 (z=-3.795, p= 0.001).

Conclusion: Patients with AD have attention reserve and therefore has higher difficulty performing the motor task associated with cognitive, with consequent increase of imbalance, which can lead to falls.