DUAL-TASK TRAINING AS AN INTERVENTION TO IMPROVE BALANCE OF A PATIENT WITH VESTIBULAR HYPOFUNCTION: A CASE REPORT

Boor, MMP

Mayo School of Health Sciences Program in Physical Therapy

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Compliance Statement
Subject signed a consent form. Subject data was kept confidential.

BACKGROUND AND PURPOSE: Patients with vestibular disorders, such as unilateral vestibular hypofunction (UVH), account for up to 45% of dizziness complaints. Along with dizziness, patients with vestibular dysfunction often complain of imbalance and have been found to have an increased risk for falls. Despite evidence that suggests traditional single-task balance training may not be effective in improving dual-task performance, where cognitive and balance tasks are performed simultaneously as is required during many everyday activities, the effectiveness of dual-task training is unclear. This case report describes the use of dual-task training as an intervention to improve balance and functional ability in a person with vestibular hypofunction.

CASE DESCRIPTION: The patient was an 83-year-old male who presented with complaints of dizziness and imbalance that prevented him from safely completing activities of daily living. Upon examination, deficits in dual-task performance were also noted. Over the course of sixteen therapy sessions, cognitive tasks, such as counting and spelling, were incorporated into traditional static and dynamic balance activities. The focus of dual-task training was the completion of balance activities, not correct performance on the cognitive tasks.

OUTCOMES: Improvements were observed in all outcome measures: Timed Up & Go (TUG), TUG paired with cognitive tasks, Dynamic Gait Index, gait speed, and Romberg on Foam Eyes Closed. These results indicated decreased risk for falls and improvements in vestibular function, balance, and functional ability.

CONCLUSIONS: Despite lack of evidence for the effectiveness of dual-task training, the findings of this case report suggest training under dual-task conditions may have partially led to improvements in balance and functional ability in a person with vestibular hypofunction.