

A STUDY TO COMPARE THE EFFECT OF MOTOR DUAL TASK TRAINING AND COGNITIVE DUAL TASK TRAINING AND COMBINATION OF BOTH ON GAIT IN SUBJECTS WITH SUB - ACUTE STROKE - A RANDOMIZED CONTROLLED TRIAL

ANUSHA GHIMIRE¹, R. RAJA² & CHANDRIKA³

¹Research Scholar, Kempegowda Institute of Physiotherapy, V.V. Puram, Bengaluru, Karnataka, India

²Associate Professor, Kempegowda Institute of Physiotherapy, V.V. Puram, Bengaluru, Karnataka, India

³Tutor, Kempegowda Institute of Physiotherapy, V.V. Puram, Bengaluru, Karnataka, India

ABSTRACT

Background and Objectives

Hemiplegia, is one of the most common impairments after stroke and contributes significantly, to reduce gait performance. Dual task is defined by, simultaneous production of two tasks which is motor dual task and a cognitive dual task. For those suffering from after effect of stroke, it helps them in a series of tasks that is done, in daily lives. Therefore, the objective of the study was to assess and compare the combined effect of motor dual task training and cognitive dual task training on gait, in subjects with sub-acute stroke.

Methods

Subjects were screened as per inclusion and exclusion criteria, that has got ischemic stroke. A written informed consent was signed by the subject and was rehabilitated, for 5days a week, for 4 weeks. They were divided into three groups, namely Group A (CDTT), Group B (MDTT) and Group C (CDTT&MDTT). The intervention was, with the dual task training program; i.e., exercises involving cognitive dual task and motor dual task. The outcome measures were SSQOL, BBS and FGAS. These scales were taken before intervention, at the interval (2nd week) and after the intervention (4th week).

Results

Out of three groups, Group C (CDTT and MDTTT) improved significantly than group A and B. In Group C, the SSQOL score improved from pre intervention mean of 133.6, to post intervention mean of 144.2. The BBS score improved from pre intervention mean of 43.67, to post intervention mean of 50. The FGS score improved from pre intervention mean of 18.73, to post intervention mean of 25.07.

Conclusion

Following the intervention, at the end of 4th week, results showed clinically and statistically, improved in the SSQOL, BBS and FGAS scores, in Group C compared to Group A and B. Therefore, the increased scores of SSQOL, BBS and FGAS signify that, the subject gait can be improved after combined effect of cognitive and motor dual task training.

KEYWORDS: Stroke, Stroke Specific Quality of Life, Berg Balance Scale, Functional Gait Assessment Scale, Dual Task Training, Cognitive Dual Task Training, Motor Dual Task Training