Effect of Dynamic Body-Weight Support on Function Independence Measure in Acute Ischemic Stroke

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Purpose

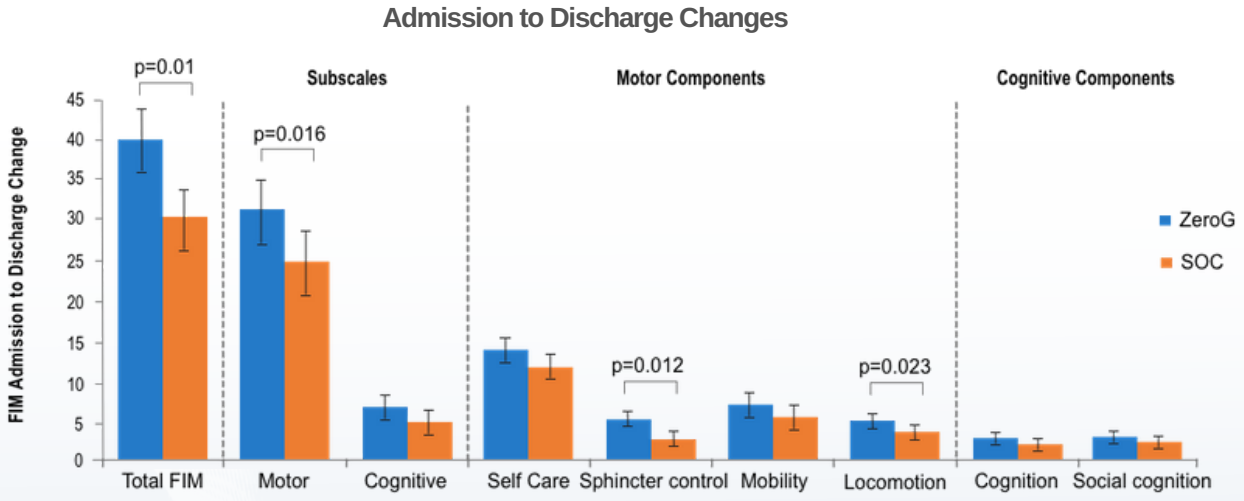
This study compared outcomes in patients with acute ischemic stroke who received overground dynamic body-weight support (BWS) training as part of their daily physical therapy program to patients who underwent standard of care (no dynamic BWS training).

Design

The experimental group consisted of twenty-nine patients with acute ischemic stroke (CVA) who participated in daily physical therapy that included overground gait and balance activities while receiving dynamic BWS. The control group included twenty-nine patients with CVA who received standardized physical therapy with no dynamic body-weight support (standard of care, SOC). The primary outcome measure was change in overall FIM scores from admission to discharge, while secondary outcome measures included total motor FIM score and total cognitive FIM score, as well as subscales of motor FIM (self-care, sphincter control, mobility, locomotion) and cognitive FIM (cognition, social cognition).

Results

While both groups demonstrated significant improvements in overall FIM scores, the acute CVA patients who utilized the ZeroG during their daily physical therapy program achieved greater gains than the SOC group. Specifically, the ZeroG trained group improved their overall FIM by 40 points while the SOC group only improved by 30.5 points. This difference was found to be statistically significant ($p = 0.01$). In addition, the ZeroG group demonstrated greater gains in motor FIM ($p = 0.16$), sphincter control ($p = 0.012$) and locomotion ($p = 0.023$) than the SOC group.



Conclusion

Using ZeroG with acute ischemic stroke patients during inpatient rehabilitation resulted in higher gains in overall function than standardized physical therapy interventions.

Reference

Elwert N, Powell ES, Anggelis E, Sawaki L, "Effect of dynamic body-weight support on function independence measure in acute ischemic stroke." 14th ISPRM World Congress and 53rd AAP Annual Meeting. 2020.