

Abstract

Title:

The influence of virtual reality on stabilization functions of patients after cerebrovascular accident with neglect syndrome.

Objectives:

The objective of this thesis was to clarify whether postural stability of patients after cerebrovascular accident with neglect syndrome significantly worsen as an after-effect of virtual reality exposure in comparison with healthy probands and patients after cerebrovascular accident without neglect syndrome.

Methods:

28 probands took part in this research, specifically 10 patients after cerebrovascular accident with neglect syndrome, 6 patients after cerebrovascular accident without neglect syndrome, and 12 healthy probands. All patients had been tested with Catherine Bergego Scale to evaluate neglect syndrome before the measurement of postural stability itself. That measurement consisted of probands being tested with Timed Up and Go test and a part of Berg Balance Scale. Afterwards, they took 10 minutes of immersive virtual reality game. Immediately after that Timed Up and Go test and Berg Balance Scale were repeated. The data were processed with MySQL database using a HeidiSQL program.

Results:

This research suggests that after exposure to virtual reality, there is no difference in changes of postural stability of patients with neglect syndrome in comparison with healthy probands or patients after cerebrovascular accident without neglect syndrome, i.e. safety of the use of virtual reality with regards to the risk of falls is not negatively affected by the presence of neglect syndrome.

Keywords:

Neglect syndrome, virtual reality, postural stability, cybersickness