

Abstract

Title: The evaluation of functional sitting stability of paraplegics

Objectives: The aim of this work is to evaluate the functional stability of paraplegics sitting through tests. Another objective is to determine what is the effect of fourteen days rehabilitation intervention on the sitting patients.

Methods: Designed experiment was processed by the form of quantitative research. There were 10 patients with spinal cord injuries, especially paraplegics included - 5 men and 5 women. The history was detected with the main emphasis on assessment ASIA score. Measurement of unsupported upright sitting was done thanks to the Plantograf V09. It records the current pressure distribution and movement of the center of pressure (COP). Functional T - shirt test was evaluated by using a stopwatch. Proband's responded two questions about their current condition after rehabilitation after the output measuring. The therapist rating was included in the results. All data were further processed in Microsoft Office Excel 2007.

Results: Measurements confirmed the reliability of both used tests. The t-shirt test can be used as an objective method of assessing functional stability of sitting. Test of unsupported upright sitting measured by Plantografu is also usable. It would be appropriate to set the measuring apparatus a higher sensitivity for the detection of finer monitored deflections for better evaluation. The results confirmed all three hypotheses. Rehabilitation had a positive effect on the sitting stability. Subjective rating of the patient and the therapist equivalent to a change of deflections. The better ability to stabilization of the trunk in the group with low paraplegia is evident, compared with the group with high paraplegia (visible at a plurality of deflection). Due to inaccuracy of the instrument, it is appropriate to note that the measurement does not show accurate results but a tendency.

Keywords: paraplegia, the stability of the seat, upright sitting, unsupported sitting, dynamic sitting, trunk postural reactivity, Plantograf, T - shirt test, rehabilitation, spinal cord injury (SCI)