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Title

Effectiveness of the Erigo therapy on secondary complications after neurological injuries in acute stages: a literature review

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Summary

Using the Erigo therapy for patients with Neurological disorders during acute stages counteracts secondary damage due to immobilization, enhances the optimum utilization of the neuroplasticity and recovery potential, and furthermore improves the patient's communication skills.

Introduction/ basics

Patients with severe neurological disorders such as spinal cord injury (SCI), stroke, and Traumatic brain injury (TBI) are often forced to lie in bed for a long time and this may cause many complications, such as the instability of the cardio-pulmonary system and other negative physiological and biochemical changes in all organs and systems of the body. Therefore, to overcome some of the secondary complications which occur with these types of neurological disorders a safe mobilization and intensive sensorimotor stimulation should be performed right after the injury. To offer patients locomotion therapy a novel, robotic tilt-table ("Erigo") was developed that allows passive stepping movements and simultaneous verticalization of the patients. The aim of this review was to investigate the effect of Erigo therapy on neurological dysfunction and secondary complications after neurological injuries.

Material method; implementation/ process

According to the population intervention comparison outcome measure (PICO) methods and based on selected keywords, 14 studies were met the inclusion criteria for #nal evaluation.

Results

The results of the analysis demonstrated that an early activation and stimulation of the patient with neurological disorders by means of Erigo therapy improve the secondary complications

after a neurological injury such as loss of muscle mass and strength, negative changes in blood conditions, urinary complications, nutritional problems and other side effects like sensory deprivation, isolation, and confinement. Also, a patient trained with Erigo tolerates the upright position better than patients treated on conventional tilt tables without a stepping function and cyclic leg loading.

Discussion/ conclusion; conclusion for the practice

Most of the literature is demonstrated that Erigo therapy in the patient with neurological dysfunction ensures the optimum utilization of the neuroplasticity and recovery potential. Furthermore, it improves the patient's communication and cooperation skills and counteracts secondary damage due to immobilization. And generally, the advantages of early rehabilitation with the Erigo are early and safe mobilization, enhanced cardiovascular output by cyclic leg loading, increased patient awareness, and reduced time in acute care.

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