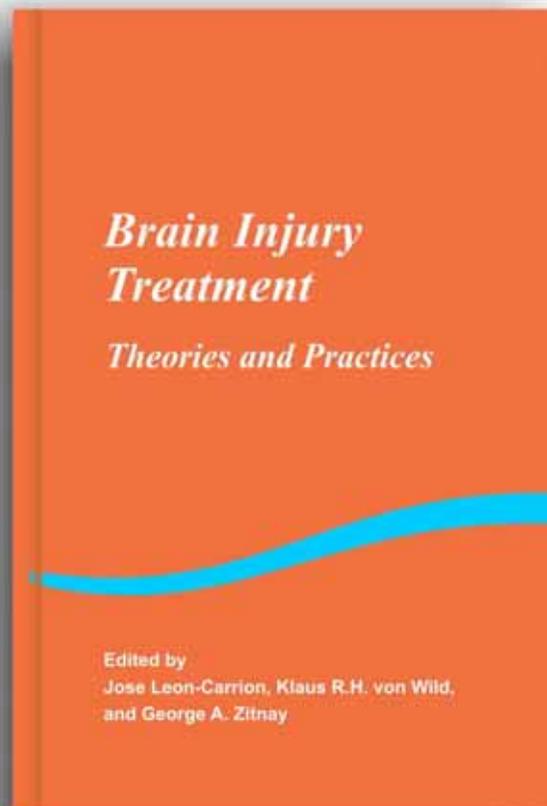


Разработанные компанией НПЦ «Ин Витро» реабилитационные технологии, реализуемые прибором «Ремиокор», являются одними из немногих, признанных в мире российских медицинских реабилитационных технологий. Подтверждение этому - изданное в 2006 году руководство: «Brain Injury Treatment (Theories and Practices)», в котором глава № 9 целиком посвящена ряду медицинских технологий, реализуемых комплексом «Ремиокор», которые так и называются: THE REMYOCOR METHOD (смотри ниже).



Chapter 9

REHABILITATION OF EQUILIBRIUM AND POSTURE CONTROL AFTER BRAIN INJURY. THE REMYOCOR METHOD.

Jose Leon-Carrion
(University of Seville, Spain)
Eugene Mikhailenok
(InVitro, St. Petersburg, Russia)
Rosario Dominguez-Morales
(Center for Brain Injury Rehabilitation, C.RE.CER. Seville, Spain)
Olga Voronina
(NeuroBird, Sevilla, Spain / St. Petersburg, Russia)

1. Introduction

Balance dysfunction and problems of postural control are commonly observed in people with acquired brain injury, causing problems in the control of body position in space and difficulties in stability and orientation. This chapter offers a conceptualization and protocolization of an effective system of functional reeducation of problems of balance and stability associated with neurological injury. Different studies note the importance of treating balance at the beginning of rehabilitation due to the fact that the degree of balance dysfunction upon admission to rehabilitation would be a significant predictor of the need for assistance at discharge. Routine assessment of balance at admission to inpatient rehabilitation may enhance the ability to predict rehabilitation outcomes beyond that provided by assessment of functional status alone.

Emphasis on rehabilitation techniques to treat balance dysfunction in the patient with traumatic brain injury will be considered in this chapter.

Different studies point out the importance of the rehabilitation of balance. In a study by Juneja, Czorny and Lins¹ it was found that balance scores in the Berg Balance Scale at admission accounted for more variation than scores on the FIM instrument. A multicenter analysis made by Greenwald, Cilla, Marwitz, et al² assessed sitting and standing balance within 72 hours of admission to inpatient rehabilitation, found that patients under 50 years of age had a significant association with normal sitting and standing balance. Measures of severity of traumatic brain injury (admission Glasgow Coma Score, length of post-traumatic amnesia, length of coma, and acute care length of stay) were each significant in relation to impaired sitting but not standing balance. The presence of intracranial hemorrhages did not have a significant relationship with either sitting or standing balance. Intracranial compression had a significant relationship with standing but not sitting balance. Another study involving 237 cases of patients sustaining traumatic brain injury admitted to a rehabilitation unit,³ found that the combination of age, initial admission Glasgow Coma Score, rehabilitation admission strength, standing balance and sitting balance accounted for 29% of the variance in the Discharge total FIM score. Among these, sitting balance was the second most powerful predictor of both selected elements of the discharge FIM motor score and Discharge FIM-T. Sitting balance predictive capacity was exceeded in importance only by age. The authors conclude that impairments in sitting balance appear to have a significant impact in functional outcome.

2. Motor control and Stability

The concept of stability is closely related to that of equilibrium: the resistance to both linear and angular acceleration. The ability of an individual to assume and maintain a stable position is referred to as balance. Stability is achieved when an equilibrium between destabilizing and stabilizing forces is established.⁴ To obtain postural control for stability and orientation, people need to integrate sensory