

REHABILITATION OF A PATIENT WITH PARAPLEGIA AFTER SPINAL CORD INJURY-CASE REPORT

**Daniela Gechevska, Cvetanka Gjerakaroska Savevska,
Biljana Mitrevska, Valentina Koevska, Erieta Nikolikj Dimitrova,
Maja Manoleva, Marija Gocevska, Biljana Kalchovska,
Teodora Jugova, Lidija Stojanoska Matjanoska, Ana Krsteska**

PHI University Clinic for Physical Medicine and Rehabilitation, Macedonia
e-mail: dgechevska@gmail.com

Background

Spinal cord injury (SCI) is a critical medical condition that causes numerous impairments leading to accompanying disabilities. The rehabilitation of paraplegic patients following SCI is influenced by various factors like level of injury, timing of rehabilitation and available therapeutic interventions. Robotic-assisted gait training (RAGT) offers many advantages, including the capability to increase intensity and total duration of training while maintaining a physiological gait pattern.

Case report

A 20-year-old patient with a fracture of the Th10 and Th11 vertebrae following a car accident, with compression on the spinal cord at those levels, underwent surgery a month before first rehabilitation. He was presented with bilateral lower limb weakness, spasticity, absence of bowel and bladder control, unable to stand and walk. Incomplete SCI classified as B on the American Spinal Injury Association (ASIA) Impairment Scale, Berg Balance scale (BBS) score 0 out of 56 reflecting complete inability to walk. Barthel index (BI) for activities of daily living (ADL) was 13 - total dependency. The patient was treated with a combined approach of conventional physiotherapy and RAGT on the Lokomat Pro. Conventional rehabilitation consisted of manual massage, magnetotherapy, stretching exercises, positioning, bed mobility and trunk stability exercises, static and dynamic balance exercises, walking with orthosis and crutches, occupational therapy. RAGT was carried out in three sessions, 15 treatments each with individually customized parameters.

Conclusion

Results: The combined approach led to a significant improvement in functional motor skills, including walking without orthosis, balance and lower limb muscle strength. After three sessions he was classified D on ASIA scale, 54 score on BBS-independent, BI was 100-full independence. This case study's findings show the importance of early onset of physiotherapy and RAGT in enabling patients to carry out ADL and prevention of serious secondary problems. A combined approach could be promising in alleviating the burden of disability caused by SCI.

Keywords: SCI injuries, Lokomat, combined approach