

## COMPLEX THERAPEUTICAL REHABILITATION APPROACH IN THE CASE OF A POLYTRAUMA PATIENT WITH TRAUMATIC BRAIN AND SPINAL CORD INJURIES - CASE REPORT

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### Abstract

**Introduction:** The multidisciplinary approach of polytrauma cases including traumatic brain and spinal cord injuries and the survival outcome, represents one of the greatest challenges. Not to neglect the decrease of function and the psycho-cognitive minimization sequels which are at least as important in regard to the patient's future quality of life.

**Materials and methods:** Under THEBA Bioethics Commission approval (9181/ 11.Apr.2018), this paper presents a case of a 28-year-old male patient with AIS/ Frankel (A) paraplegia after a spinal cord injury (SCI) with T3 level secondary to T4-T5 fracture surgically treated. SCI was associated with moderate traumatic brain injury TBI (subarachnoid haemorrhage), thoracic-abdominal contusion (left pneumothorax, hepatic trauma) and multiple fractures (sternum and costal, surgically treated), neurogenic bladder and bowel. This condition was due to a car accident, occurred on November 13, 2017.

The patient was admitted with a psycho-cognitive status, complete bilateral motor deficit in the lower limbs - paraplegia, sensitivity disorders of anaesthesia type and sphincter disorders. The patient was clinically, para-clinically and functionally assessed according to the standardized protocols implemented in our clinic through the assessment scales (AIS, FIM, QoL-Quality of Life, Asworth, Penn, FAC, and WISCI II).

**Results:** The patient's evolution was slow but favourable. He benefited of neurosurgical care and had thoracic surgery to extract the osteosynthesis material at the sternum. Meanwhile, he learned the technique of intermittent catheterisation. As a result of the rehabilitation program, the patient's finally reached the level of wheelchair locomotion and has a complete restored the cognitive function.

**Conclusions:** The multidisciplinary team approach consisting of physicians, kinesio-therapists, nurses and auxiliary healthcare personnel was the key of the patient's survival, eliminated the cognitive dysfunction and reduced as much as possible the locomotor one.

**Keywords:** rehabilitation, traumatic brain injury, spinal cord injury

### References:

1. Onose G., Padure L.,” Compendiu de Neuroreabilitare - la adulți, copii și vârstnici Editura Universitara “Carol Davila”, Bucuresti, 6: 205-244; 13: 436-450, 2008
2. Onose G., Anghelescu A. - Ghid de diagnostic și tratament și reabilitare în suferințe după traumatisme vertebro-medulare, Ed. Universitară „Carol Davila”, 2011
3. S Rajasekaran, Rishi Mugeshe Kanna, and Ajay Prasad Shetty, Management of thoracolumbar spine trauma: An overview, Indian J Orthop. 2015 Jan-Feb; 49(1): 72–82.