Case Report

Exploration of assistance and rehabilitation possibilities for neurosurgical patients with late complications after craniocerebral injuries based on one patient case

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ABSTRACT

Introduction: Craniocerebral injuries (CCIs) are the most frequent causes of death and long-term disability concerning people younger than 25 years of age in Poland. Their incidence is 180–220 per 100 thousand people. According to available data, 10% of patients after head injury suffer from severe craniocerebral trauma defined as a condition in which the level of awareness and responsiveness remains significantly decreased after resuscitation or worsens within 48 h following injury. Currently, due to the advances in knowledge and development of technology in the field of neurosurgery and anesthesiology, more and more patients survive and consequently require additional diagnosis, surgery and prolonged rehabilitation.

Aim: The aim of this work was to present the case of a patient with craniocerebral trauma, who remained in a vegetative state for 8 months, and then, following the surgical treatment of late complications in the form of hydrocephalus performed in the Division of Neurosurgery at the University Hospital in Olsztyn and long-term rehabilitation, regained full mobility.

Materials and methods: The study is based on the analysis of medical records concerning a patient treated in numerous centers for 16 months after craniocerebral trauma.

Results and discussion: The most common complications after CCIs include coma, impaired cognition, multiple joint contractures, hydrocephalus, ossification mainly related to hips, knees, shoulders and elbows, urinary tract infections and respiratory tract infections. Often these patients have undergone a tracheotomy, have had catheters inserted into their bladders, and are fed by probe. Inadequate care and a deficiency in protein and vitamin supplements can result in the development of decubitus ulcers. A patient after craniocerebral trauma requires intense movement rehabilitation, neuropsychological and neurologopedic rehabilitation. It is necessary to proceed appropriately in order to achieve bladder automaticity. After the stabilization of vital signs, the patient should be included in a comprehensive diagnostic and rehabilitation program provided by neurologists, neurosurgeons, orthopedic surgeons, ENT physicians, specialists in rehabilitation and physiotherapy, based on specified standards. Nurses and other care providers, medical and other health care personnel dealing with such patients should be adequately trained. The patient's family needs to be educated as well.

Conclusions: Patients after CCIs require long-term interdisciplinary monitoring and periodic diagnostic tests. Consequently, a long-term plan concerning the treatment of such patients should be developed.

Keywords: Craniocerebral injuries; Late complications; Long-term plan