



WEB OF SCIENCE

## CLINICAL AND REHABILITATIVE CONSIDERATIONS IN A COMPLEX CASE OF SPASTIC TETRAPLEGIA, MIXED APHASIA, SECONDARY ENCEPHALOPATHY – POST SEVERE TRAUMATIC BRAIN INJURY WITH HEMORRHAGIC AND ISCHEMIC LESIONS – WITH FAVORABLE LATE EVOLUTION AND POST-SYMPTOMATIC STATUS AFTER SARS-COV-2 INFECTION

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### Abstract

**Introduction.** The traumatic brain injury remains a current research topic considering the severity and the increased incidence of this pathology. Both physical and neuro-psychological sequelae require a complex rehabilitation program.

**Material and methods.** We describe the evolution of a 20-year-old case, victim of a severe traumatic brain injury due to physical aggression, with spastic tetraplegia, extended ischemia in the left cerebral hemisphere, mixed aphasia, post-traumatic encephalopathy, left eyelid ptosis, right paresis of nerve III, post remitted status of left subdural hematoma, post remitted status of right fronto-parietal subarachnoid hemorrhage, severe joint stiffness (right elbow and fist, bilateral hips and knees), cachexia and SARS-COV-2 infection. In our clinic the patient followed medical, complex kinetherapeutic treatments and was functionally assessed using the following scales: modified Ashworth, Penn Spasm Frequency Scale ( Penn), Life Quality Assessment ( QOL ), Montreal Cognitive Assessment ( MoCA ), FAC International Scale, Glasgow Outcome Scale-Extended (GOS-E), modified Rankin scale (mRS).

**Results.** During the hospitalization, the patient presented a favorable late evolution with a great improvement of motor and neurological deficit, aphasia in remission, improvement of eyelid ptosis and joint stiffness, fact also confirmed by the increasing scores from the evaluated scales.

**Conclusions.** Consequently in traumatic brain injury the proper medication, personalized rehabilitation program, ergotherapy, speech therapy, a great deal of involvement and documentation of current information is required to improve the patient's quality of life.

**Keywords:** *traumatic brain injury, neuro-rehabilitation program, spastic tetraplegia*