Abstract

Introduction: Traumatic brain injury (TBI) is a major cause of death and disability. "TBI is a non-degenerative, non-congenital insult to the brain, from an external mechanical force, possibly leading to permanent or temporary impairments of cognitive/ diminished or altered state of consciousness, physical, and psycho-social functions". Depending on the severity of the lesions and the particularity of the case, the clinical picture differs. This paper presents - with the approval of the Bioethics Committee of TEHBA, (No.9181/11.04.2018) - an extremely complex case of psycho-cognitive status (minimally responsive state) and behavioral (marked psychomotor agitation) after a severe TBI, (GCS = 4 points in the emergency room) in a polytraumatic context, as well as the favorable outcome of this condition, due to its therapeutic-rehabilitation management.

Materials and Methods: A 20-year-old female patient was admitted to our Neuromuscular Rehabilitation Clinic's Division with the diagnosis of psycho-cognitive rough status in marked post-severe TBI (GCS = 4 at presentation in the emergency room) and Cervical SCI (Spinal Cord Injury) AIS/ Frankel (D) with impairment from C3 level down, after a fracture of the right C3 articular massive, with unilateral rotational dislocation of C3-C4 (conservatively treated), multiple cranial fractures - frontal-parietal right - CT confirmed, hemorrhage under arachnoid - current CT : enlargement of pericardial fluid spaces, diffuse cerebral , the right front centimetric gap - all without neurosurgery indication, the scalp frontal-parietal (sutured cured), limb fractures on the right hand side (osteosynthesis with humerus and tibia metal stems, right and left ilio-ischiopubian fractures (conservatively treated) - all after road car accident on 24.01.2018 (anamnestic - passenger-) -. The patient was clinically and functionally evaluated, according to the standardized protocols implemented in our clinic, through assessment scales (MMSE-Mini Mental State Examination-, GOS, MRS-Modified Rankin Scale-, FIM, AIS/ Frankel, FAC, QoL-Quality of Life-) and also para-clinically, including CT scans.

Results: Following a complex neuro-recovery program developed by a multidisciplinary team made of doctors, kinesio-therapists, middle and allied health personnel, the patient had an extremely good evolution (during a short period of time) - attested on the scales and also - on a psycho-cognitive and behavioral level -. From psychomotor agitation and unrecognizable words, she began to have a suitable behavior for a patient in this condition, an understandable language and an increased capacity to stay in the wheelchair for a longer period of time (because her lower limb fractures still do not permit walking).

Conclusions: This case represents an exhaustive example of a multidisciplinary and particular neuro-rehabilitative therapy approach with both clinical and scientific impact.