

## SUCCESSFUL OUTCOMES IN SEVERE TRAUMATIC BRAIN INJURY AFTER NEUROPSYCHOLOGICAL REHABILITATION: A CADE STUDY

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### Abstract

We report a case involving a 33-year-old, right-handed, male patient who suffered a severe closed traumatic brain injury (TBI) (GCS: 5/18). Neuroimaging findings showed gliotic lesions in the left anterior temporal lobe with severe left hippocampal atrophy. The left anterior temporal lobe is involved in the organization and categorization of verbal material, speech comprehension and the left hippocampus has predominant involvement in verbal memory. Baseline neuropsychological (NP) evaluation showed impairments predominantly in attention, verbal fluency, executive function, verbal, non-verbal and prospective memory. In addition, he exhibited behavioral difficulties including irritability, misinterpretation, suspiciousness and anger outbursts. The patient underwent a holistic day treatment rehabilitation program (5 hours/day, 4 days/week) for 12 months at the Brain Injury Day Treatment Unit of ELEPAP Athens. Post NP evaluation showed significant improvement in attention, verbal fluency (semantic and phonemic), verbal, prospective and visuospatial memory and in certain domains of executive functions, such as planning, problem solving, cognitive inhibition and mental flexibility. Despite the extent of the lesions, the patient significantly improved both in behavioral and cognitive domains and eighteen months after his TBI, he was able to return to his work, and reached adequate levels of daily functionality.