Outcome of 18 patients with a severe traumatic brain injury and prognostic factors

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Keywords: Neuroradiologic evaluations; Evoked potentials; Neuropsychological tests; Neurobehavioral Rating Scale; Quality of life

Introduction.– Severe traumatic brain injury is a serious public health issue. In the long run, cognitive and behavioural deficiencies remain the most frequent and the most disabling. This prospective, descriptive and monocentric study aims to investigate the medical and psychosocial outcome of 18 patients, 2 to 4 years after their trauma, and tries to highlight, in the initial data collected, which were the most prognostic factors.

Methodology.– Initial data includes: usual clinical data, lesional neuroradiologic evaluations, analyses of early and late auditory evoked potentials, assessments of coma duration and post-traumatic amnesia. Long-term clinical evaluations include neuropsychological tests assessing attention, memory and executive functions and the Neurobehavioral Rating Scale-Revised. Depression and anxiety were evaluated, and data from the Glasgow Outcome Scale, the Measure of Functional Independence and a quality of life scale were used as a functional evaluation.

Results.– Six patients present a good recovery; seven present a severe handicap with a lack of autonomy, four have a moderate handicap preventing them from returning to work and one patient died. The most frequent neuropsychological impairment is memory loss; the most disabling one is the disexecutive syndrome. Duration of coma and post-traumatic amnesia are strongly correlated to the evolutionary profile, in the contrary of the intensity of diffuse axonal injury and brainstem lesions in MRI. The absence of the N100 component is correlated with a pejorative evolution in all cases.

Discussion.– The heterogeneity of the population and their clinical background participates to the low correlations between the initial data collected and the patient’s evolutions and justifies an individualized, prolonged and multisectoral care for each patient.

Further readings


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The effect of age at injury and socio-economic status on recovery after childhood severe traumatic brain injury: Results of a prospective study

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Keywords: Age at injury; Socio-economic status; Traumatic brain injury; Quality of life

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