

**P01-287 - PSYCHIATRIC AND NEUROPSYCHOLOGIC CHANGES IN GROWTH HORMONE DEFICIENT SUBJECTS AFTER TRAUMATIC BRAIN INJURY AND RESPONSE TO GROWTH HORMONE REPLACEMENT THERAPY**

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**Objective:** Traumatic brain injury (TBI) is recently recognized as a risk factor for hypopituitarism, presented most frequently with growth hormone deficiency (GHD). GHD is associated not only with changes in body composition, but also with impaired quality of life, cognitive dysfunctions and some psychiatric sequelae, usually classified as “depression” or “atypical depression”. The impact of GH therapy on mental status is still unknown.

**Design:** Psychiatric and cognitive functions were tested in six adult GHD subjects at baseline (minimum three years after TBI), reassessed after six months of GH replacement therapy as well as twelve months after discontinuation of GH therapy. Psychiatric and cognitive examinations included semi-structured interviews and three instruments: Symptom-checklist (SCL-90-R), Zung Depression Inventory and standard composite neuropsychological battery.

**Results:** Six months of GH therapy in GHD TBI patients improved cognitive abilities (particularly verbal and nonverbal memory) and improved psychiatric functioning. Severity of depression decreased, as well as intensity of interpersonal sensitivity, hostility, paranoid ideation, anxiety and psychoticism. In three GHD patients who stopped GH therapy for twelve months we registered worsening of the verbal and nonverbal memory, as well as increase in Zung score and three SCL dimensions: inter-personal sensitivity, anxiety and paranoid ideation.

**Conclusion:** This preliminary data suggest that GH therapy induced reduction of depression, social dysfunction and improvement in certain cognitive domains in GHD patients after TBI. Our data support the necessity of conducting randomized placebo-controlled trials on the effects of GH therapy on neuropsychological and psychiatric status in GHD TBI patients.