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Early weight gain after childhood traumatic brain injury

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Keywords: Traumatic brain injury; Outcome; Weight; Children; Pituitary function

Objectives. To assess weight changes after traumatic brain injury (TBI) in children and the factors influencing them.

Methods. Longitudinal observational study of 39 children (59% boys, mean age 8.0 ± 4.4) with TBI of mixed severity. Weight and height before TBI were obtained from the children’s records and were then measured monthly for one-year post-TBI. Body mass index (BMI) and BMI z-scores were calculated, and pre-TBI values were compared with functional values using paired tests. Linear mixed-effect interaction models evaluated the effect of children’s characteristics on z-score evolution.

Results. Z-score curves revealed early weight loss followed by a rapid increase. Mean BMI gain over the study period was 0.9 kg/m² (P < 0.001) and mean z-score gain was 0.4 (P = 0.008). Six children had become overweight. Factors associated with a greater increase rate in z-score were mobility restriction, male sex and older age. Global pre- to post-TBI weight gain was significantly higher in males. Pituitary hormonal testing was available for 17 children at 3 months and for 27 at one year. Growth hormone deficiency was detected in one child.

Discussion. Early post-TBI weight gain of children was rapid and excessive. Male sex was a risk factor for excessive weight gain.

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Validation and assessment of the psychometric properties of the French version of the Child and Adolescent Scale of Participation (CASP) in a sample of children with acquired brain injury

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Keywords: Child; Adolescent; Acquired brain injury; Participation; Assessment; Questionnaire

Introduction. Participation is a major outcome following childhood acquired brain injury (ABI) and there is a lack of validated participation measures. The CASP was specifically developed for use with children and adolescents with ABI, to measure the extent to which they participate in home, school, and community activities, as reported by family caregivers, compared to children of the same age. The aim of this study was to examine the psychometric properties of the French translation of the CASP.

Methods. Sixty-three caregivers of children with ABI, aged 5–18 years, answered the CASP. Factorial structure and internal consistency of the CASP were assessed.

Results. Analyses provided evidence of a five-factor structure contributing to 79% of the variance. Internal consistency (Cronbach’s alpha) was acceptable for all the factor scales. Overall participation was relatively good, with levels of participation ranging from 59.37% to 100% for the total scores of the different CASP sections. Participation was restricted for the most elaborated aspects of everyday life, such as managing daily schedule, shopping and managing money, chores/responsibilities, structured events and activities in community.