CO0150

Gross Motor Function Measure Evolution Ratio: Use as a control for natural progression in cerebral palsy

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Objective To develop a new way to interpret Gross Motor Function Measure (GMFM-66) score improvement in studies conducted without control groups in children with cerebral palsy (CP).

Material and methods The curves, which describe the pattern of motor development according to the children’s Gross Motor Function Classification System level, were used as historical control to define the GMFM-66 expected natural evolution in children with CP. These curves have been modeled and generalized to fit the curve to particular children characteristics.

Results Assuming that the GMFM-66 score evolution followed the shape of the Rosenbaum curves, by taking into account the age and GMFM-66 score of children, the expected natural evolution of the GMFM-66 score was predicted for any group of children with CP who were < 8 years old. Because the expected natural evolution could be predicted for a specific group of children with CP, the efficacy of a treatment could be determined by comparing the GMFM-66 score evolution measured before and after treatment with the expected natural evolution for the same period.

A new index, the Gross Motor Function Measure Evolution Ratio, was defined as follows: Gross Motor Function Measure Evolution Ratio = measured GMFM-66 score change/expected natural evolution.

Discussion/Conclusion For practical or ethical reasons, it is almost impossible to use control groups in studies evaluating effectiveness of many therapeutic modalities. The Gross Motor Function Measure Evolution Ratio gives the opportunity to take into account the expected natural evolution of the gross motor function of children with CP, which is essential to accurately interpret the therapy effect on the GMFM-66.

Keywords Cerebral palsy; Children; GMFM

Disclosure of interest The authors declare that they have no competing interest.

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Perceived effectiveness, tolerance of cares in children and adults with cerebral palsy

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Objective A better understanding of the perception of the rehabilitative and medical care’s by persons with cerebral palsy (CP) and their families may help in providing better adherence to these cares. The main objective of this study was to assess overall satisfaction, self-perception of effectiveness and tolerance of the rehabilitative and medical cares in individuals with CP.

Material and methods This was a cross-sectional questionnaire-based study. A total of 950 questionnaires were sent to French Britain children and adults with CP. Perceived effectiveness and tolerance were evaluated for each type of care using a Likert scale from 1 to 7 and overall satisfaction by a visual analog scale. Comparison of means and uni-and-multivariate analyzes for correlation analysis were carried out.

Results A total of 512 (53.9%) questionnaires were analyzed; 230 (44.9%) were children and 54% were walkers (GMFCS I, II or III).