Comparative analysis of GMFM-66 scores and GMFCS in Teletón Santiago Institute, 2006-2010

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ABSTRACT

Introduction: The Gross Motor Function Measure (GMFM), and the Gross Motor Function Classification System (GMFCS) are two validated scales that measure gross motor developmental changes in children with cerebral palsy (CP), and are utilized to quantify therapeutic intervention results.

Objective: To analyze gross motor function scores (GMFM-66), across condition severity levels (GMFCS), considering age, type, and CP topographical distribution, at Santiago’s Teletón Institute, from 2006 to 2010. Comparison of results with that obtained in the literature, and evaluate the eventual prognostic value of both scales.

Methodology: A descriptive retrospective review study of a GMFM database was conducted. A total of 397 children with CP met the inclusion criteria. GMFM-66 scores and GMFCS levels were associated according to the selected variables, and were compared to the literature.

Results: 63.2% of the children are under 6 years of age. Hemiplegic and diplegic patients concentrate 76.6% of cases. According to type, 84.9% of patients with spastic CP. Independently from the analyzed variable, the median values of GMFM-66 decrease two to four times as the severity of the pathology increases from level I to level IV. Quadriplegic children are distributed among levels III and IV. No hemiplegic patients were found at level V. Compared to other studies, no significant differences were found in GMFM-66 scores across GMFCS levels. Visually, the score diagram by GMFCS levels and age is similar to Rosenbaum’s.

Conclusion: GMFM-66 score distribution across GMFCS levels turns out as described in the literature, however caution is suggested if used as a predictive value for individual cases.

Key words: cerebral palsy, children, GMFCS, GMFM-66.