Effect of the combined treatment of botulinum toxin type A and occupational therapy on upper limb functionality of hemiparetic patients

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ABSTRACT

Introduction: Referring patients infiltrated by botulinum toxin type A to occupational therapy raises the need to measure the joint effect of both treatments on the functionality of the upper limb. This proposal has not been solied in present times.

Objective: To determine the combined effect of botulinum toxin type A and occupational therapy on the function of the upper extremity.

Materials and Method: 12 children, ages 3 to 6, with hemiplegic spastic cerebral palsy, slight to moderate involvement of the motor function, attending a pre-school or school system, for each of whom the mobility and functionality of the affected upper extremity were evaluated using an observations guideline of video registered activities, previous to the exposure of botulinum toxin type A, 2 to 3 weeks after infi ltration, and also after 10 sessions of occupational therapy. The reliability of observers was analyzed by means of α Cronbach. The effect of interventions was tested using variability analysis by Friedman ranges. For all statistic tests: p < 0.05.

Results: 75% pre-schools, girls (58.3%), ages 5 and up (58.3%), right hemiplegia (66.7%). Results indicate a significant improvement of the upper extremity functionality, following botulinum toxin type A infiltration and occupational therapy (p < 0.004). However, a reduction of functionality was registered following an infiltration with botulinum toxin type A, which could be attributed to a disarray of the motor chain by paresia, selectively induced by the infiltration. The degree of agreement between observers was 0.89, which can be considered a very good one.

Conclusion: A significant gain of the upper extremity’s functionality is observed following infiltration with botulinum toxin type A combined with occupational therapy.

Key words: Occupational therapy, botulinum toxin, hemiplegia, functionality, upper extremity, children.