

COHORT OF POST STROKE SPASTIC HEMIPLEGIC PATIENTS USING BOTULINUM TOXIN TYPE A FROM 2004 TO 2016



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Introduction

Individuals who have suffered a stroke often have function limitations. Motor impairment secondary to stroke is the leading cause of adult disability. Beside the loss of muscle strength, spasticity resulting from pyramidal syndrome interferes with mobility, changing posture and execution of voluntary movements. In order to minimize muscle spasticity, improve motor control and influence positively on functional independence, intramuscular injections of botulinum toxin type A (BTX-A) have been used in selected patients in the last 4 decades

Objective

The objective of our study was to evaluate the impact of combining BTX-A with physiotherapy on the degree of disability and functionality in a sample of 201 stable stroke patients.

Methods

This study cohort included adult patients diagnosed with hemiplegic stroke, and treated with BTX-A at the Physical Medicine and Rehabilitation Department at the Clementino Fraga Filho University Hospital (SMFR HUCFF-UFRJ), from 2004 to 2016. Demographic data was collected, and corporal structure (Brunnstrom) and functional (FIM; Functional Independence Measure) classifications were determined before and after BTX-A treatment. Eligibility criteria for treatment with BTX-A were: (1) Presence of spasticity in upper limbs and lower limbs that interfered with mobility, Modified Ashworth Scale (MAS) score of ≥ 2 ; and (2) 6 months of stroke evolution. The exclusion criteria were contraindications to the use of or allergic to BTX-A, comorbidities (venous thromboembolism, pneumonia and fatigue), diffuse hypertonia, or fixed contracture. Outcomes included MAS, FIM (the 13 items relating to motor domain; total score of 91) and Brunnstrom scale (characterized impairment as mild (5.5), moderate (3.5), or severe (1.5)) at the beginning and the end of the evaluation period.

patients

	categories	N	%	average
Gender	M	91	45,3	-
	F	110	54,7	-
Age(years)	19 - 89	201	-	58,78
Affected side	right	92	45,77	-
	left	87	43,28	-
Time from CVA (years)	N/D	22	10,94	-
	1 - 28	201	-	6,10
Types of CVA	Hemoragic	33	16,41	-
	Ischemic	151	75,12	-

Results

Data from 161 patients complete clinical and functional data were included in the analysis. We compared scores of all variables at the start and end of the treatment period evaluated with BTX-A according to body segments. The results showed a migration from the severe category to the mild and moderate categories; functionality increased on average.

Figure 1. Results on classification based on the Brunnstrom Scale before and after treatment with BTX-A associated with physical therapy

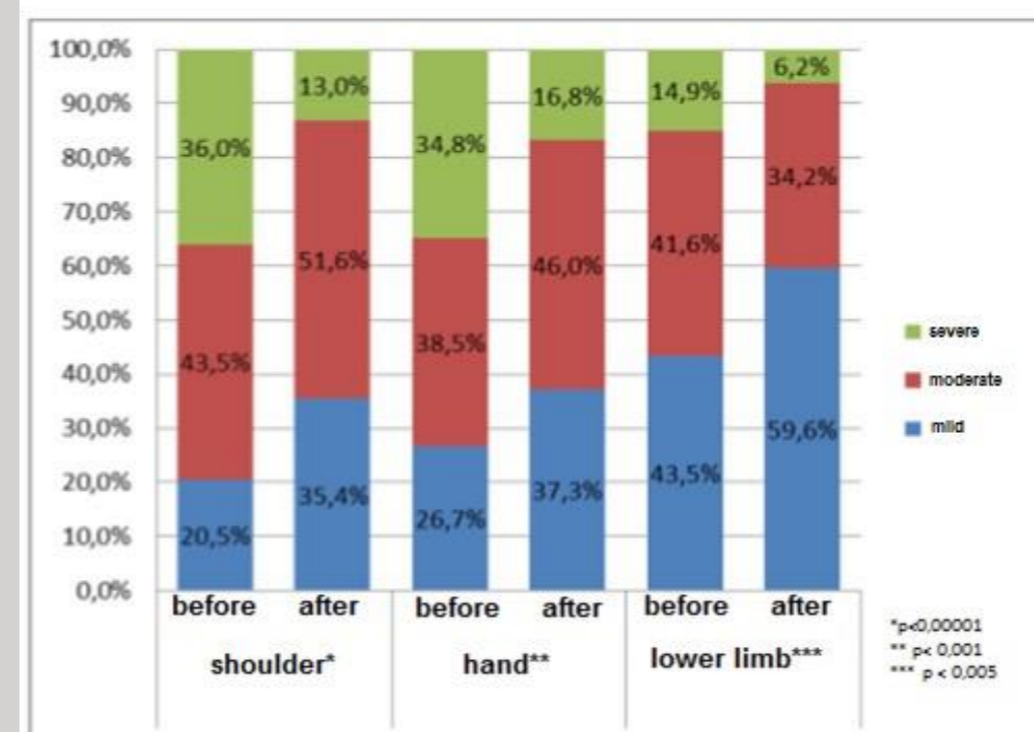
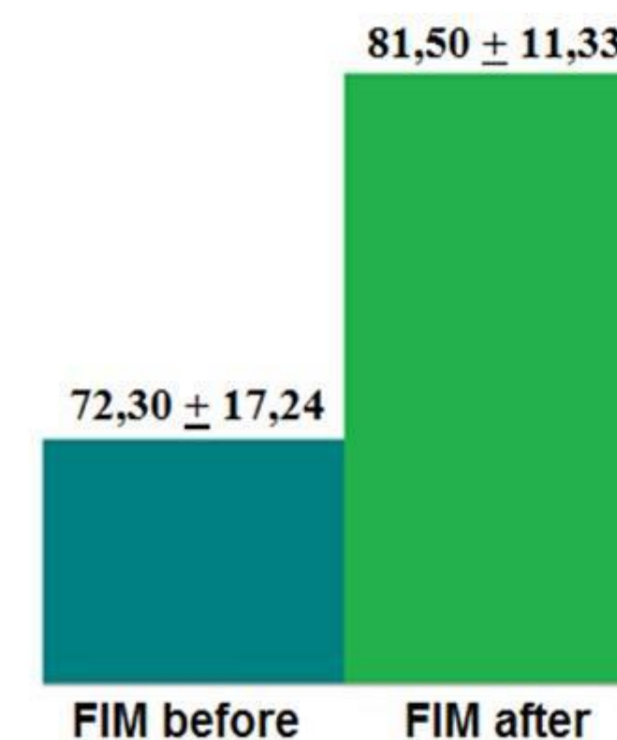


Figure 2. Results on classification based on the FIM Scale before and after treatment with BTX-A associated with physical therapy



Conclusion

In this sample of patients with chronic hemiplegia, treatment with BTX-A was associated with significant improvements in motor function and functionality in all patients.

Bibliographie

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