

EFFECTS OF NESA NEUROMODULATION TREATMENT ON STROKE SEQUELAE. CASES REPORT

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Introduction/Background

Stroke is the second leading cause of death worldwide and the leading cause of neurological disability in adults. Surviving patients often suffer physical sequelae related to mobility, vision or speech, as well as mood, cognitive and personality disorders, affecting their functionality and quality of life.

Two clinical cases of male patients (case 1: 52 years old; case 2: 62 years old) with stroke with **left hemiparesis** and various sequelae are described.

Materials and Methods

The treatment protocol included 10 one-hour sessions with NESA non-invasive neuromodulation treatment (NNT). 2 times a week.

The patients were evaluated at **4 different moments** (pre-treatment, after 5 sessions, after 10 sessions, and after a 2-week follow-up)

VARIABLES

- Muscular tone
 - Balance
- Basic activities of daily living
 - Pain

Table 1. Study variables

Measurement Test	PATIENT 1		PATIENT 2	
	Pre-treatment	2 week follow-up	Pre-treatment	2 week follow-up
ASHWORTH	MMSS: 3 MMII: 2	MMSS: 2 MMII: 1,5	MMSS: 3 MMII: 2	MMSS: 2 MMII: 1,5
BERG	7/56	7/56	48/56	48/56
BARTHEL	25/100	30/100	90/100	90/100
EVA	0/10	0/10	0/10	0/10

Table 2. Results after 2 weeks in patients in each variable studied.

Results

Both patients showed an improvement in **muscle tone** and pain and balance values did not change throughout the study.
The value of **independence of basic activities** of daily living improved in patient 1.



Figure 1. Study patient 2 receiving his NNT treatment

Discussion and Conclusion

The NESA neuromodulation treatment can produce changes in muscle tone after the proposed treatment and could open a new line of treatment in the condition of stroke and spasticity.

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