Pure motor neglect (MN) was described as an under-utilisation of one side, without defects of strength, reflexes or sensibility [2], following a brain lesion. MN physiopathology remains under debate; among the proposed mechanisms, interhemispheric imbalance following a stroke has been suggested [3]. Non-invasive brain stimulation techniques (dDCS: transcranial Direct Current Stimulation, and rTMS: repetitive Transcranial Magnetic Stimulation) could have a beneficial effect on this imbalance [1].

A right hemisphere stroke patient with a pure motor neglect of the left forelimb, who was functionally stable 5 months after the ictus, benefited from ten dDCS sessions (inhibition of the healthy hemisphere) during classical rehabilitation (motor and functional training). In order to evaluate the intervention effectiveness, repeated assessments of upper limb function were performed with validated tests (Jebson Taylor Test, Purdue Pegboard Test, Motor Activity Log). Monomaniacal and bimanual dexterity durably improved. Subjective assessment with the MAL of the use of the left upper limb was stable before the intervention; it significantly and durably improved after the intervention: MAL – Amount of use – 1.9 at pretest, 3.5 at posttest (P = 0.003), 3.9 after 3 months; MAL – Quality of movement – 2.1 at pretest, 4 at posttest (P = 0.0004) and 4.4 after 3 months).

This case report reports the efficacy of an inhibitory stimulation of the healthy hemisphere in a case of pure motor neglect after stroke. To our knowledge, it is the first description of functional improvement in pure motor neglect achieved by non-invasive brain stimulation associated to conventional rehabilitation.

References

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P063-e

Factors influencing functional outcome and prognosis one year after a first stroke

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Background.– Caribbean stroke patients are younger than the North Atlantic ones; therefore stroke social costs must be higher in these countries. Functional outcome follow-up studies show a great variability of results.

Methods.– We performed a prospective study of Guadeloupean successive patients admitted at University Hospital of Pointe-à-Pitre between December 2010 and February 2011 for a first hemispherical stroke in order to describe their functional outcome, mortality rate and quality of life, one year post stroke. Patients were evaluated in the emergency department, at hospital discharge and one-year post stroke using National Institute of Health Stroke (NIHSS), Rankin (mRS) and Functional Independence Measure (FIM) scales. Quality of life was estimated using MOS-SF-36 scale.

Results.– Among 140 patients admitted for stroke, 78 patients (33 women) were included. Haemorrhagic stroke represented 24.4%. Mean age was 62.1 ± 17.7 years; 70.5% of patients had hypertension, 29.4% diabetes, and 23.6% chronic renal failure. Mortality rate was 29.4% and recurrence rate 2.6% one year post stroke. We evaluated 39 of 55 survivors (71%). Scale evolution (emergency vs. one year later) was: NIHSS 6.2 ± 4.9 vs. 3.3 ± 3.9 (P < 0.001), mRS 2.2 ± 1.6 vs. 2.1 ± 1.8 (P = 0.467), FIM 103.2 ± 28.2 vs. 101.7 ± 31.5 (P = 0.031), Body Mass Index (BMI) was significantly higher (+ 2.3 kg/m²). In multivariate analysis, apolipemia, hemianopia and incontinence significantly influenced one year FIM scale (P < 0.001). Quality of life was altered.

Conclusion.– One year after a first stroke, despite a significant improvement of neurological handicap, the level of dependence was stable and quality of life altered. These data must be taken into account in the development of the socio-professional projects after a stroke. They encourage seeking anew rehabilitation approach for hemispheric stroke.

Further reading


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Effect of cortical repetitive transcranial magnetic stimulation on oropharyngeal dysphagia in Wallenberg syndrome

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Introduction.– Swallowing problems are very frequent in Wallenberg syndrome. In these patients, the paralysis of the IX and the X cranial nerves, often unilateral, could compromise swallowing efficiency for a long term. This need for the patient to have an exclusive feeding with a gastrostomy for many years. The aim of our study was therefore to test the effect of cortical repetitive transcranial magnetic stimulation (rTMS) to improve oropharyngeal dysphagia in these patients.

Method.– Three patients were studied. Swallowing function was explored by pharyngeal high-resolution video manometry before and after each session of rTMS. There were three sessions of rTMS spaced by 6 months. Each rTMS session consisted in 20 minutes of 1 Hz frequency cortical stimulations on the pharyngeal motor cortex, 10 minutes on each hemisphere. During the rTMS...