Motor and visual cortical excitability in migraines patients with or without aura: transcranial magnetic stimulation.

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Abstract:

Abstract BACKGROUND AND PURPOSE OF STUDY: Controversy surrounds measures of visual and motor cortical excitability in migraines: some authors report that interictal excitability is increased, others decreased. The aim of this work was to provide further evidence about motor and visual cortical excitability in migraines between attacks. PATIENTS AND METHODS: Twenty-eight migraines patients, 18 with aura and 10 patients without aura and 20 healthy right-handed, age and sex matched volunteers were included in the study. Each subject underwent transcranial magnetic stimulation and was submitted to the following: determination of resting motor threshold (rMT), silent period (SP), MEP input-output curves, phosphene threshold (PT). RESULTS: Patients had lower rMT, shorter SP, and increased MEP recruitment compared with control group. There was an increased prevalence of phosphene (85%) as well as lower PT (63% of the stimulator output) in migraines compared with control group (75%, and 72%, respectively). There was a significant negative correlation between duration of attacks and PT (P = 0.02). No significant differences between patients with aura and without aura in different parameters of cortical excitability. CONCLUSION: Our findings confirm that the motor and visual cortices are hyperexcitable and this appears partly to be consequent upon a failure of inhibitory circuits.

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