Effect of Transcranial Magnetic Stimulation on Depressive Symptoms in People with Multiple Sclerosis

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BACKGROUND

Multiple sclerosis (MS) is an autoimmune disease of the central nervous system, which causes several physical and mental symptoms, with depression being a frequent symptom. Transcranial Magnetic Stimulation (TMS) has been used for several treatments, including depression.

OBJECTIVE

To evaluate the effect of TMS on depressive symptoms in people with MS.

METHODS

A quantitative study was performed with 20 people diagnosed with multiple sclerosis (13 relapsing-remitting, 4 primary-progressive and 3 secondary-progressive), aged between 33 and 68 years (Mean = 50.0, SD = 10.6 years), 6 men (30%) and 14 women (70%), with EDSS score from 0 to 6.5 (Mean = 4.6, SD = 1.9), time of diagnostic between 1 and 24 years (Mean = 10.0, SD = 7.2 years). The protocol consisted of 10 interventions by TMS (primary motor cortex (Cz): 50 pulses per time, 30 trains, 20seconds of interval, totaling 1500 pulses at 90% of resting motor threshold and left dorsolateral prefrontal cortex (F3): 10Hz, 50 pulses per train, 40 trains, 20 seconds interval, totaling 2000 pulses at 110% of resting threshold) during 10 consecutive working days. For evaluation, an interview was conducted to collect data and applied the BDI (Beck Depressions Inventory) at the beginning and at the end of the stimulations.

RESULTS

It was observed that 30% of the participants presented depression. It was found that 65% of participants had improvement in symptoms of depression. However, among those who had depression, 83.3% had improved symptoms.

CONCLUSIONS

This preliminary study suggests that TMS has potential for treating depression in people with MS. The promising results encourage the acquisition of additional evidence.

BIBLIOGRAPHIC REFERENCES

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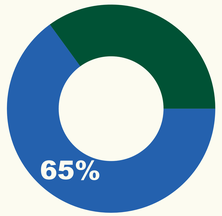

improvement in symptoms of depression

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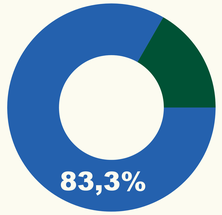

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