

뇌신경재활

게시일시 및 장소 : 10 월 18 일(금) 13:15-18:00 Room G(3F)

질의응답 일시 및 장소 : 10 월 18 일(금) 15:45-16:30 Room G(3F)

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Effects of prefrontal tDCS on executive function in patients with traumatic brain injury

Ja Young Choi^{1*}, Jong Youb Lim², Jin Seok Bae², Dongmin Hwang¹, Kang Jae Jung^{2†}

School of Medicine, Chungnam National University, Department of Rehabilitation Medicine¹, Eulji University College of Medicine, Department of Physical and Rehabilitation Medicine²

Objective

Transcranial direct current stimulation (tDCS), a non-invasive stimulation, has been reported to be a promising technique in enhancing cognitive function by modulating cortical excitability. This study was designed to investigate the effect of prefrontal tDCS on executive function in patients with traumatic brain injury.

Design

Randomized, sham-controlled, double-blind trial

Methods

Sixteen patients with traumatic brain injury were included. After baseline assessment, they were randomized into two groups: cognitive task training with 1mA of prefrontal tDCS group and sham stimulation group. The experimental group (n=8) received 20 min of tDCS to target the left dorsolateral prefrontal cortex (DLPFC), 5 days per week for 2 weeks, total 10 sessions. The control group (n= 8) received sham stimulation during the same period. Frontal assessment battery (FAB), Montreal cognitive assessment (MOCA), and stroop test were conducted to measure executive function. Assessments were performed at baseline, after intervention, and 2 weeks after intervention.

Results

Fourteen subjects completed the intervention. Although both groups showed improvements in clinical measure, there were no statistically significant group differences in executive function measured by FAB, MOCA, and stroop test.

Conclusion

In this study, tDCS has limited impact on executive functions in patient with traumatic brain injury. Further study is needed to delineate the factors associated with the effectiveness of tDCS therapy.