

ABSTRAK

EFEK PENAMBAHAN *TRANSCRANIAL DIRECT CURRENT STIMULATION* (tDCS) PADA TERAPI OKUPASI TERHADAP PERFORMA MOTORIK ANGGOTA GERAK ATAS PENDERITA PASCA STROKE ISKEMIK

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Objektif:

Gangguan Performa motorik anggota gerak atas pada penderita stroke dapat menyebabkan kesulitan untuk melakukan performa anggota motorik gerak atas sehingga mempengaruhi kualitas hidup dan aktivitas sehari-hari. Pemulihan fungsional dapat terjadi pada minggu-minggu pertama setelah *stroke*, terutama karena mekanisme spontan. Otak yang terkena serangan stroke dapat memiliki kemampuan memperbaiki diri yang dikenal dengan neuroplastisitas. *Transcranial direct current stimulation* (tDCS) yang merupakan alat *non invasive* yang dapat menstimulasi bagian otak yang terkena serangan stroke sehingga dapat memicu terjadinya neuroplastisitas.

Tujuan: Mengetahui efek pemberian terapi *Transcranial direct current stimulation* (tDCS) terhadap peningkatan performa motorik anggota gerak atas pada penderita stroke iskemik.

Metode: Delapan pasien stroke yang memenuhi kriteria inklusi, dibagi menjadi 2 kelompok, kelompok kontrol dan kelompok intervensi. Kelompok kontrol mendapatkan terapi okupasi selama 5 hari berturut-turut dan kelompok intervensi mendapatkan terapi okupasi simultan dengan pemberian tDCS selama 5 hari berturut-turut. Performa motorik anggota gerak atas dinilai dengan Action Research Arm test (ARAT) pada saat sebelum dan sesudah dilakukan perlakuan.

Hasil: Tidak terdapat peningkatan nilai ARAT secara signifikan baik pada kelompok kontrol ($p=0,252$) maupun kelompok intervensi ($p=0,090$).

Kesimpulan:

Pemberiaan stimulasi tDCS pada terapi okupasi secara simultan dan terapi okupasi saja tidak dapat meningkatkan performa motorik anggota gerak atas pada penderita stroke iskemik subakut.

Kata Kunci: *Transcranial direct current stimulation*, Terapi okupasi, *Action Research Arm Test*, Performa motorik anggota gerak atas.

ABSTRACT

THE EFFECT OF ADDITION OF TRANSCRANIAL DIRECT CURRENT STIMULATION (tDCS) IN OCCUPATIONAL THERAPY ON THE MOTOR PERFORMANCE OF MOTION MEMBERS OF POST ISCHEMIC STROKE PATIENTS

Objective:

Impaired motor performance of the upper limbs in stroke sufferers can cause difficulties to perform the performance of the upper limb motor that affects the quality of life and daily activities. Functional recovery can occur in the first weeks after a stroke, mainly due to spontaneous mechanisms. A brain affected by a stroke can have the ability to repair itself, known as neuroplasticity. Transcranial direct current stimulation (tDCS) which is a non-invasive tool that can stimulate the part of the brain affected by a stroke so that it can trigger neuroplasticity.

Objective: To determine the effect of providing Transcranial direct current stimulation (tDCS) therapy to improve motor performance of upper limbs in ischemic stroke patients.

Methods: Eight stroke patients who met the inclusion criteria were divided into 2 groups, a control group and an intervention group. The control group received occupational therapy for 5 consecutive days and the intervention group received simultaneous occupational therapy by administering tDCS for 5 consecutive days. The motor performance of the upper limbs was assessed by the Action Research Arm test (ARAT) before and after treatment.

Results: There was no significant increase in ARAT values in either the control group ($p = 0.252$) or the intervention group ($p = 0.090$).

Conclusion: The simultaneous administration of tDCS stimulation to occupational therapy and occupational therapy alone could not improve the motor performance of the upper limbs in patients with subacute ischemic stroke.

Keywords: Transcranial direct current stimulation, Occupational therapy, Action Research Arm Test, Motor performance of upper limbs.