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## The Effects of Transcranial Direct Current Stimulation on Cognition Skills after Stroke

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Article Info	ABSTRACT
<i>Article type:</i> Original article	<ul> <li>Background and Aim: treatment of cognition skills after stroke is important factor and is one of the novel issue in speech and language pathology.</li> <li>Materials and Methods: We conducted a search in PMC, Web of Science, PubMed, Scopus, Medline, SID, Google Scholar and Ovid databases. The present information is available reviewing the articles from 1996 to 2020 through the search of the resources.</li> <li>Results: Strokes can adversely affect vision, balance, cognition, memory and speech. Many stroke patients have reduced speaking abilities, called aphasia. We included 20 studies involving a total of 408 participants aged above 18 with acute, postacute or chronic ischemic or hemorrhagic stroke. Some patients had pricking sensation at the sites of stimulation after the tDCS but there were no notable side effects. The risk of bias did not differ substantially for different comparisons and outcomes. We found four studies with 196 participants examining the effects of tDCS versus sham tDCS. two studies with 69 participants assessed the effects of tDCS on ADLs at the end of follow-up, and found improved ADL performance. However, this effect may be underestimated due to reporting bias. In one study After intervention, all patients had significant improvements in aphasia quotients, spontaneous speech, and auditory verbal comprehension. However, auditory verbal comprehension improved significantly more in patients treated with a cathode, as compared to patients in the other groups. In another study In the line bisection test, significant improvements were observed after both the dual-and the single or sham stimulation modes (p&lt;0.05). The star cancelation test did not show any significant change.</li> <li>Conclusion: Speech therapy methods can improve brain synaptic plasticity. The aim of therapy is to recover as much of speech as possible and/or find alternative ways of communicating. The tDCS is a safe and effective neuro-rehabilitation modality that improves post stroke cognitive dysfunctions. Moreover,</li></ul>
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