

Magnetic treatment improves stroke patients' ability to communicate

November 15 2011

(Medical Xpress) -- Magnetic stimulation of the brain could help improve language skills of stroke survivors with aphasia, according to research by The University of Queensland.

Dr. Caroline Barwood, who recently completed her PhD at UQ's School of Health and Rehabilitation Sciences, conducted the research and found significant improvement in the language skills of stroke patients after they underwent Transcranial [Magnetic Stimulation](#) (TMS).

TMS is a non-invasive method that seeks to target [brain activity](#), with the intention to facilitate the reorganisation of [brain regions](#) with the purpose to alter language behaviours.

The treatment involves placing a coil on the head of the participant which uses [electromagnetic induction](#) to induce weak [electric currents](#) through a changing magnetic field.

Twelve patients who experienced strokes between one and six years prior to the study were recruited for participation and treated at the UQ Center for Neurogenic Communication Disorders Research.

“Eighty percent of patients who were treated with TMS showed improvements in language skills, most notably in expressive language, which includes naming, repetition, and discourse. No language improvements were seen for those patients treated with placebo TMS,” Dr. Barwood said.

Guided by a state-of-the-art neuronavigational system, magnetic resonance imaging (MRI) was used to pin point the stimulation site for two sets of five-day treatments.

Dr. Barwood said changes in patients' language scores were measured on standardised speech pathology tests.

“The research strongly demonstrates that TMS may be a very useful and safe treatment method. Overall it has generated exciting discussion regarding the direction of treatment and the considerable impact this may have in the future to decrease the cost of rehabilitation,” she said.

Dr. Barwood explains the technique differs to traditional language therapy, which uses behavioural methods, and said in the future the two methods may be used together.

Dr. Barwood's PhD has been reviewed by a number of journals across fields of neurology and speech pathology and was published in peer-reviewed journals; *The European Journal of Neurology*; *Brain and Language*; *Brain Stimulation*; and *Neurorehabilitation*.

Dr. Barwood said in light of the very positive results, she is seeking to continue and extend the current methodology to include a larger sample as a clinical trial.

Provided by University of Queensland

Citation: Magnetic treatment improves stroke patients' ability to communicate (2011, November 15) retrieved 18 April 2024 from <https://medicalxpress.com/news/2011-11-magnetic-treatment-patients-ability.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.