

Exploring novel neurostimulation based therapies for swallowing impairments in Parkinson's

<https://neurodegenerationresearch.eu/survey/exploring-novel-neurostimulation-based-therapies-for-swallowing-impairments-in-parkinsons/>

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Contact information of lead PI Country

United Kingdom

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Exploring novel neurostimulation based therapies for swallowing impairments in Parkinson's

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Parkinson's UK

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2.5

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Research Abstract

At least a third of Parkinson's Disease (PD) patients experience dysphagia, which can result in malnutrition, dehydration and worsen quality-of-life. In the UK, PD patients consider current management for dysphagia inadequate. Recently, several neurostimulation techniques, such as repetitive transcranial magnetic stimulation (rTMS), have been examined with the prospect to provide neurorehabilitation for limb functions, yet there are no such studies for dysphagia in PD. Previously, we studied the influence of dopaminergic medication (Levodopa) in PD patients with

and without dysphagia. We noticed differential cortico-bulbar outputs to transcranial magnetic stimulation of patients with dysphagia compared to non-dysphagic PD of similar age and PD severity. Our results imply that restoration of these observed brain perturbations may favourably influence dysphagia.

Here, we propose a placebo-controlled feasibility, cross-over study with 66 patients with idiopathic PD, recruited over 28 months, to investigate the effects of 3 different neurorehabilitation methods, that have been developed and trialled at our department and have shown the potential to produce changes at a brain level in health and disease. These neurorehabilitation paradigms are: inhibitory (1Hz), excitatory rTMS (5Hz) and Pharyngeal Electrical Stimulation (PES). All patients will be randomised to one of the 3 treatments and will receive a real and sham intervention.

Our project will help to identify which is the most beneficial and/or best tolerated neurorehabilitative approach for dysphagic PD patients, the level and the extent of changes that can be promoted in PD and will serve as a prelude for multi-center trials in the future.

Further information available at:

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