

Symptomatic Treatment of Vascular Cognitive Impairment

<https://neurodegenerationresearch.eu/survey/symptomatic-treatment-of-vascular-cognitive-impairment/>

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Country

Netherlands

Title of project or programme

Symptomatic Treatment of Vascular Cognitive Impairment

Source of funding information

Alzheimer Nederland

Total sum awarded (Euro)

€ 238,000

Start date of award

01/06/2013

Total duration of award in years

4

Keywords

Research Abstract

Background: Vascular Cognitive Impairment is an important cause of cognitive impairment and dementia. Up till now, there are no approved symptomatic treatments for Vascular Cognitive Impairment. The aims of this project are three-fold: 1. to detect individual sensitivity to a pharmacologic intervention targeting the monoaminergic (methylfenidate) and cholinergic (galantamine) neurotransmitter systems, in patients with Vascular Cognitive Impairment, 2. to correlate cognitive symptoms with structural and functional changes in monoaminergic and cholinergic systems on MRI in patients with Vascular Cognitive Impairment, 3. to correlate structural and functional changes of monoaminergic and cholinergic systems on MRI with a positive response to a challenge with galantamine or methylfenidate in Vascular Cognitive

Impairment patients. Methods: We will recruit 60 patients with Vascular Cognitive Impairment, at the Alzheimer Center of the VU University Medical Center and the Utrecht University Medical Center. Participants will receive a complete dementia screening, including a neuropsychological and neuropsychiatric examination. They will also undergo MRI at 3T, including DTI/'fiber tracking' and RS fMRI. In a double-blind, three-way, case cross over trial, we will study the effects of methylphenidate on fronto-executive function and of galantamine on episodic memory function. During three separate visits, patients will receive the pharmacological interventions (placebo, methylphenidate, and galantamine) at our Clinical Research Unit. We will correlate baseline performance on tests for fronto-executive function and memory with integrity of white matter tracts and network function of monoaminergic and cholinergic systems on MRI. Finally, we will correlate positive responses to the pharmacological challenges with galantamine or methylphenidate with integrity of white matter tracts on DTI and network function on RS fMRI related to monoaminergic and cholinergic systems.

Further information available at:

Types:

Investments < €500k

Member States:

Netherlands

Diseases:

N/A

Years:

2016

Database Categories:

N/A

Database Tags:

N/A