Neuropsychological proof for the relationship between the posterior parietal cortex and episodic memory

Published: 18-11-2009
Last updated: 04-05-2024

Main objective: Contributing to the debate on the necessity of PPC in episodic memory by support of patient data. Secondary objective: Exploring the episodic memory theorem and developing a more sensitive (neuropsychological) research tool usable in...

Ethical review	Not approved
Status	Will not start
Health condition type	Central nervous system vascular disorders
Study type	Observational non invasive

Summary

ID

NL-OMON32700

Source
ToetsingOnline

Brief title
PPC and episodic memory

Condition

- Central nervous system vascular disorders

Synonym
cerebral stroke, memory problems

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Utrecht
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: episodic memory, parietal cortex, posterior parietal cortex

Outcome measures

Primary outcome

Contributing to the debate on the necessity of PPC in episodic memory by

support of patient data.

Secondary outcome

Exploring episodic memory and developing a more sensitive (neuropsychological)

episodic memory research tool such as a questionnaire or non-invasive memory

test that is also usable in the clinical setting.

Study description

Background summary

The influence or necessity of the posterior parietal cortex (PPC) in episodic memory is currently under debate. Several studies on healthy subjects have addressed the question whether PPC activity is related to mechanisms central to episodic memory per se, or rather associated with subsidiary processes such as attention, motor preparation demands, effort and self-related information processing. Hence important insights might follow from studying the consequences of PPC lesions on episodic memory tasks. Its influence on the other closely related cognitive skills such as perception, mental imagery, attention, and effort, all indirectly influencing episodic memory, need further investigation as well. It is also necessary to check for necessary involvement of other brain areas on episodic memory before the conclusion can be drawn that PPC and episodic memory are necessarily related. The necessity of involvement of PPC or other brain areas can only be supported by reporting on patients with and without lesions in PPC.

Study objective

Main objective: Contributing to the debate on the necessity of PPC in episodic memory by support of patient data.
Secondary objective: Exploring the episodic memory theorem and developing a

more sensitive (neuropsychological) research tool usable in the clinical setting.

Study design

A battery of non-invasive tasks aimed at inventorying memory problems and to profile cognitive skills will be administered. Most neuropsychological tests used will be standardised tests with normative references. Two experimental neuropsychological tests will be designed of which normative data needs to be collected using a control population.
In the early phase, all neuropsychological measurements will take place within 14 days of the admittance of the patients to the University Medical Centre Utrecht. This assessment is care as usual of the Department of Neurology of the UMCU.
A follow-up at about six months will take place to measure lasting cognitive effects of the infarction. This follow-up will take place either at the University Medical Centre Utrecht, Utrecht University, or at the patient*s home, depending on the needs and limitations of the patients. This follow-up is part of a scientific study and is strictly voluntary.

Study burden and risks

The patients have to sit through a neuropsychological evaluation of at approximately 2 hours (with breaks), depending on the capabilities of the patient. The duration of the assessment is proven feasible in previous documented studies. The tests all exist of non-invasive pen and paper tests, or oral tests. The assessment can be terminated without consequences at any given time when the participants feel they can take no more, or when the tests administrator thinks continuation is unwise. The neuropsychological follow-up assessment of a maximum of 3 hours (with breaks), again consisting of only pen and paper and oral tests, is also voluntary and can be terminated without consequences.

Contacts

Public
Universitair Medisch Centrum Utrecht

Heidelberglaan 100
3508 GA Utrecht
Nederland
Scientific
Universitair Medisch Centrum Utrecht

Heidelberglaan 100
3508 GA Utrecht
Nederland

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

* Patients must be 18 years or older;
* Patients with (sub-)cortical lesions;
* Lesions must be the consequence of an cerebral ischemic stroke
* Lesions must be visible on a CT- or MRI scan;
* Or ischemic stroke patients with expected episodic memory impairments referred by either the Department of Neurology or Neuropsychology of the UMCU.

Exclusion criteria

* No capability to communicate in Dutch or severe global aphasia
* History of alcohol or drug abuse;
* Neurological disorders other than (sub)cortical lesions or psychiatric disorders which could affect / have affected cognitive function;
* Any other non-neurological disorder influencing cognitive functioning.

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Will not start
Enrollment:	130
Type:	Anticipated

Ethics review

Not approved

Date:	18-11-2009
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL29389.041.09