Oculomotor performance and eye-hand coordination in dementia with Lewy bodies.

Published: 22-12-2008
Last updated: 17-08-2024

Primary:1. Which outcome variables of oculomotor performance and eye-hand coordinatio are useful to distinguish between Dementia with Lewy bodies, Alzheimerdementia and Parkinsondementia.Secundary:1. What are the base line values for the parameters...

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Neurological disorders NEC
Study type	Observational non invasive

Summary

ID

NL-OMON32578

Source
ToetsingOnline

Brief title
Complex motortasks in Dementia with Lewy bodies

Condition

- Neurological disorders NEC
- Dementia and amnestic conditions

Synonym
amnestic disorder, dementia

Research involving
Human

Sponsors and support

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

Intervention

Keyword: Dementia with Lewy Bodies, diagnostics, Eye-hand coordination, Oculomotor performance

Outcome measures

Primary outcome

Eye movements:

- Latency (defined as the time between the display of the visual stimulus and

the start of the eye movement (in milliseconds))

- Eye velocity (degrees of arc per second)

- Gaze direction accuracy or "gain" (degrees of arc)

- Number of errors in the tasks performed

Eye-hand coordination:

- Response time (defined as the time between the saccade and the start of the

hand movement (in milliseconds))

- Duration of the movement itself (in milliseconds)

- Distance traveled from start position to the target (in centimeters)

- Peak velocity of hand movement (meters per second)

- Number of errors in the tasks performed.

All outcome measurements will be compared with the results of the healthy

subjects. Also, the results between the groups themselves will be compared.

Secondary outcome

Not applicable

Study description

Background summary

Prevalence studies and reviews state DLB as the third or second most common dementia, respectively. This indicates that there are still some difficulties diagnosing DLB correctly. Meaning that discriminating between DLB, AD and PDD in the clinical setting is not yet optimized. To bridge this gap is of great importance for future research and therapeutic options.
Previous research found differences in oculomotor performance between frontal dementia and Alzheimer dementia. Also deviations in eye movements have been found in DLB. In early ALzheimer deviations in eye-hand coordination have been found even before memory problems.
Our hypothesis states that by measuring oculomotor performance and eye-hand coordination differences in outcome measures will be found between Dementia with Lewy bodies, Alzheimer dementia and Parkinson dementia.

Study objective

Primary:
1. Which outcome variables of oculomotor performance and eye-hand coordinatio are useful to distinguish between Dementia with Lewy bodies, Alzheimerdementia and Parkinsondementia.

Secundary:
1. What are the base line values for the parameters examined?
2. Is this method applicable and reproducible?
3. To what extent is there an agreement between the results and severity of pathology as previously established with neuropsychological testing?
4.To what extent is visuomotor integration affected?
5.To what extent is the spatial ability impaired?
6. Can conclusions be drawn from the abnormalities in these parameters with regard to the localization of anatomical pathology?

Study design

Experimental / Test development

Study burden and risks

Low.
The risks of this research are negligible. There will be little intervention and the investigation is not invasive. The only possibility is that the subject gets frustrated because he is unable to complete a task. But the expectation is that this will be minimal, since only subjects with mild cognitive problems will be enrolled. Moreover, the test may be interrupted if desired.

Contacts

Public
Erasmus MC, Universitair Medisch Centrum Rotterdam

Dr. Molewaterplein 50
3015 GE Rotterdam
Nederland
Scientific
Erasmus MC, Universitair Medisch Centrum Rotterdam

Dr. Molewaterplein 50
3015 GE Rotterdam
Nederland

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

Age 60 years or older
Persons with a diagnosed with a probable Dementie with Lewy bodies, Alzheimer dementia or Parkinson dementia.

Exclusion criteria

Comorbities; neurologic disorders in particular
Oculair pathology

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:	Recruitment stopped
Start date (anticipated):	26-03-2009
Enrollment:	60
Type:	Actual

Ethics review

Approved WMO

Date:	22-12-2008
Application type:	First submission
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

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	NL25284.078.08