Changes in the brain in patients with a monocular visual field defect due to glaucoma

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In the present study, we will investigate if a monocular visual field defect - due to primary open angle glaucoma - influences the anatomical integrity of the visual pathways.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON36998

Source
ToetsingOnline

Brief title
monocular visual field defect and the brain

Condition

- Other condition
- Glaucoma and ocular hypertension

Synonym
glaucoma, raised intraocular pressure

Health condition

gezonde proefpersonen

Research involving
Human

Sponsors and support

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

Intervention

Keyword: brain, eye, glaucoma, neuroimaging

Outcome measures

Primary outcome

grey and white matter density, found by MRI signal

Secondary outcome

Location of changes in grey and white matter density.

Study description

Background summary

Previous research showed that opthalmological disorders, such as glaucoma and macular degeneration are associated with a lowering of the volume of the grey and white matter in the visual pathways in the brain. In these researches, patients with binocular visual field defects due to the specific eye disease were involved. However, in half of the patients with primary open angle glaucoma, the visual field defect is monocular.

Study objective

In the present study, we will investigate if a monocular visual field defect - due to primary open angle glaucoma - influences the anatomical integrity of the visual pathways.

Study design

With an MRI scanner, we will obtain images of the brain. With statistical software, the grey and white matter density in subjects with glaucoma and in healthy control subjects will be compared.

Study burden and risks

MRI is a non-invasive method for imaging and studying the brain. Subjects are exposed to an magnetic field of 3 Tesla, and altered magnetgradients. The applied fieldquantities have been applied for routine MRI research for a long time. So far, there have no adverse effects been reported.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

- age over 18 years;Patients:
- monocular blindness; or
- monocular visual field defect due to glaucoma;Controls:
- normal vision
- healthy

Exclusion criteria

General:
- presence of metal implants
- non-removable piercings and tattoos
- claustrofobia
- epilepsia
- (presumable) pregnancy;Specific for patients:
- other ophtalmological or neurological disorders
- usage of drugs or medicine other than for the treatment of glaucoma;Specific for healthy controls:
- usage of medicine or drugs that could influence the examination

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):	07-01-2013
Enrollment:	65
Type:	Actual

Ethics review

Approved WMO

Date:	21-11-2012
Application type:	First submission

Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO Date:	08-08-2013
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

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	NL41425.042.12