Nitric Oxide Biomarkers in Glaucoma and Tinnitus

Published: 15-04-2020
Last updated: 08-04-2024

The aim of this study was to test these biomarkers of NO in glaucoma patients both with and without tinnitus. The objective was also to replicate findings from a previous study performed in Amsterdam, a collaboration between our research group and...

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Glaucoma and ocular hypertension
Study type	Observational invasive

Summary

ID

NL-OMON49687

Source
ToetsingOnline

Brief title
NO biomarkers

Condition

- Glaucoma and ocular hypertension

Synonym
Glaucoma; POAG

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen
Source(s) of monetary or material Support: Ministerie van OC&W,European committee and Uitzicht

Intervention

Keyword: Glaucoma, Nitric Oxide, Tinnitus

Outcome measures

Primary outcome

Concentrations of amino acids which mark nitric oxide production in glaucoma

patients both with and without tinnitus.

Secondary outcome

N/A

Study description

Background summary

Low nitric oxide (NO) bioavailability and oxidative stress may be common mechanisms behind glaucoma and tinnitus. NO itself diffuses quickly and is difficult to measure, however, certain metabolites can be measured as biomarkers of NO production.

Study objective

The aim of this study was to test these biomarkers of NO in glaucoma patients both with and without tinnitus. The objective was also to replicate findings from a previous study performed in Amsterdam, a collaboration between our research group and the AMC

Study design

Observational, cross-sectional

Study burden and risks

Patients who are already scheduled for an appointment in the ophthalmology clinic and who agree to participate will then be asked to go to the blood draw clinic after their appointment. Glaucoma patients will not perform any ophthalmological tests in relation to this study. The blood draw may cause minimal discomfort or bruising, but is a routine procedure. Patients will

require a maximum of 30 minutes for the blood draw. Healthy controls who send signed informed consent will be asked to go to the ophthalmology clinic for screening tests, and then afterwards to get the blood draw. If abnormal eye screening results are obtained for healthy subjects, they will be referred to their GP. Detection of signs of glaucoma may cause psychological stress, however, an early diagnosis will allow treatments to be initiated and therefore more preservation of visual functioning. Glaucoma patients will not perform any ophthalmological screening tests; therefore there is no risk of identifying any other eye conditions. Overall the study causes minimal discomfort and risk to the patient.

Contacts

Public
Universitair Medisch Centrum Groningen

Hanzeplein 1
Groningen 9713 GZ
NL
Scientific
Universitair Medisch Centrum Groningen

Hanzeplein 1
Groningen 9713 GZ
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

50-70 years of age
For patients only: Diagnosed primary open angle glaucoma
For those with tinnitus, response of tinnitus *always* or *sometimes* in F1 questionnaire
Written informed consent.

Exclusion criteria

Patients taking ototoxic medications will be excluded from this study. These include: loop diuretics, Apirin, NSAIDs, and chemotherapy agents.

For healthy controls only, glaucoma or family history of glaucoma. This will be determined by the ophthalmologic screening described in section 3.

Study design

Design

Study type:	Observational invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)

Primary purpose: Basic science

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	03-08-2020
Enrollment:	40
Type:	Actual

Ethics review

Approved WMO

Date:	15-04-2020
Application type:	First submission
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	NL72776.042.20