A multi-centre database for clinical and molecular analysis of age-related macular degeneration

Published: 31-01-2008
Last updated: 08-05-2024

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Ethical review	Approved WMO
Status	Pending
Health condition type	Ocular structural change, deposit and degeneration NEC
Study type	Observational invasive

Summary

ID

NL-OMON31087

Source
ToetsingOnline

Brief title
AMD Database

Condition

- Ocular structural change, deposit and degeneration NEC

Synonym
age-related macular degeneration, age-related maculopathy

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Sint Radboud
Source(s) of monetary or material Support: Ministerie van OC&W,Universiteit Keulen

Intervention

Keyword: macular degeneration, risk factors, treatment

Outcome measures

Primary outcome

Genetic and pathogenic mechanisms;

Classification and imaging;

Therapeutic intervention

Secondary outcome

not applicable

Study description

Background summary

Age-related maculopathy (ARM) represents a group of degenerative disorders of the macula that are increasingly frequent after 55 years of age. Early ARM is defined as the presence of (soft) drusen and pigmentary abnormalities of the retinal pigment epithelium. The late stage of ARM is similar to age-related macular degeneration (AMD) and includes both geographic atrophy (*dry* AMD) and neovascular or exudative (*wet*) AMD. Overall, the AMD phenotype is highly diversive and ranges from minor atrophic changes in the retinal pigment epithelium and associated neurosensory detachment to subretinal hemorrhages and large disciform lesions extending beyond the vascular arcades.

The prevalence of AMD is about 1.5% in subjects over the age of 50 and increases up to 20% in subjects over the age of 80. The prevalence of AMD is expected to double within the next 15 years. AMD is currently the leading cause of legal blindness in the Western World, and as such the subject of numerous studies. Population-based, cross sectional and epidemiologic studies have provided us with an enormous amount of data concerning incidence, prevalence and risk factors with regard to AMD. At present, an increasing number of studies are directed at unravelling the pathophysiology of AMD. Closely related to this subject are the ongoing molecular genetic studies aimed at identifying underlying genetic factors. Over the last years, the development of several new and promising pharmacotherapeutic approaches has culminated in a variety of therapeutic trials.

For these and future studies, the availability of clinically well-defined, homogeneous AMD patient groups is crucial. Since AMD most likely represents a group of disorders sharing phenotypic similarities, study designs that incorporate clinically homogenous patient groups will have a greater likelihood of identifying significant correlations. In this, the development of a multi-centre database with large numbers of AMD patients will be instrumental in future studies on the pathophysiology, as well as the genetic and environmental factors of this multifactorial disease. In addition, the collaboration of various centres in the AMD database enables the quick evaluation of new therapeutic regimens in large, well-described (sub)groups of AMD patients.

Study objective

Our research proposal has several aims:
1) We propose to use large-scale genetic studies to identify allelic variants that influence the development of AMD, which will enable the development of diagnostic and prognostic tools in the near future.
2) Knowledge of susceptibility factors for AMD will allow us to identify cellular pathways that are involved in the development of AMD.
3) The innate immune response, orchestrated by toll-like receptors (TLR) and mediated by the complement components, is likely to play a crucial role in the initiation and/or perpetuation of AMD. Since TLR and their intracellular signaling pathways are currently well-known pharmaceutical targets, we will decipher the potential role of TLR in AMD.
4) The identification of new cellular pathways and the role of TLR signaling will help us to understand the pathogenesis of AMD and to develop new leads for preventive and therapeutic strategies.

Study design

Data collection. Participating centres are required to collect a small number of clinical data as well as blood samples for each AMD patient that will be included (see Supplement). Most of the data can be obtained with the standard ophthalmologic examination. In addition to the blood samples, the only additional discomfort to the patient will be the completion of a questionnaire concerning their general and medical history and a standard fundus photograph. The questionnaire will be completed in an interview by a trained person. The blood samples will be stored at the departments taking part in the study. We aim to collect overall 3000 - 5000 patients and 500 age-matched control individuals.

Specific research projects may require additional investigations besides the minimally required data specified in the supplement. Examples of additional data that may be collected by participating centres with the proper resources include (high-speed) fluorescein angiography and/or indocyanine angiography,

OCT, fundus autofluorescence, measurements on macular pigment density and treatment data.

All study protocols regarding blood samples and DNA extraction, as well as the various imaging techniques can be found in supplement II and III.

Database structure. The clinical data and the fundus photographs of the AMD patients will be entered into a specificially designed database. A web based application would be preferable providing that the safety issues can be solved.

Study burden and risks

not applicable

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-related macular degeneration patients from 55 years and older

Exclusion criteria

for patients younger than 55

Study design

Design

Study type: Observational invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-09-2007
Enrollment:	2000
Type:	Anticipated

Ethics review

Approved WMO Date:	31-01-2008
Application type:	First submission
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)
Approved WMO Date:	04-05-2020
Application type:	Amendment
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

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	NL18434.091.07