Evaluation of cerebrovascular lesions and cognitive impairment in elderly patients with heart failure

Published: 20-05-2008 Last updated: 09-05-2024

1.To describe whether vascular lesions are more frequent in elderly heart failure patients compared to elderly patients with cardiovascular disease but no heart failure.2.To describe the association between these vascular lesions and executive...

Ethical review	Approved WMO	
Status	Pending	
Health condition type	Heart failures	
Study type	Observational invasive	

Summary

ID

NL-OMON30982

Source ToetsingOnline

Brief title MRI-HF

Condition

- Heart failures
- Central nervous system vascular disorders
- Cognitive and attention disorders and disturbances

Synonym

a disease affecting an artery within the brain, cerebrovascular lesions caused by heart failure, or supplying blood to the brain caused by a disorder in which the heart loses it's ability to pump blood efficiently

Research involving

Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Utrecht **Source(s) of monetary or material Support:** eigen afdeling

Intervention

Keyword: aged, cerebrovascular lesions, heart failure, magnetic resonance imaging

Outcome measures

Primary outcome

Amount of cebrovasculair lesions, mainly consisting of white matter lesions

which will be semiquantitatively measured by volumetry

Secondary outcome

(lacunar) infarctions

atrophy

Study description

Background summary

Due to the aging population heart failure is becoming an increasing problem. Heart failure is associated with cognitive deterioration. Cognitive disorders are prognostically significant in chronic heart failure patients. The specific neuropsychological profile in heart failure patients is still not clear because most clinical neuropsychological test mainly measured memory, language, perceptual abilities and not executive functioning. It is known that executive dysfunction is an important determinant of functional status. Neuroimaging of the brain has hardly been performed in elderly heart failure patients. There is little evidence that heart failure is associated with white matter lesions (WML's). It is suggested that these WMLs result from chronic ischemia due to hypoperfusion and disturbance of cerebral blood flow. This reduced cerebal blood flow is probably the main pathophysiological mechanism in the development of cognitive impairment in heart failure.

Study objective

1.To describe whether vascular lesions are more frequent in elderly heart

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failure patients compared to elderly patients with cardiovascular disease but no heart failure.

2.To describe the association between these vascular lesions and executive dysfunction

Study design

Pilot study, descriptive and explorative. .Substudy of AGED-HF study

Magnetic Resonance imaging of cerebrum and echo duplex of the carotid arteries will be performed in participants of the AGED-HF study.

Study burden and risks

Participants have to visit the hospital once for MRI scan and echo duplex of the carotid arteries. This will take about 1 hour. There are acccording to us no risks associated with partipation.

Contacts

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Trial sites

Listed location countries

Netherlands

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Eligibility criteria

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

Inclusion criteria

Aged 70 years and over, Able to visit the Deventer Hospital, documented diagnosis of heart failure, Full comprehension of the Dutch language, informed consent

Exclusion criteria

Metal pieces anywhere in the body, Defribillator, Pacemaker, Metal pins in the cerebrovascular circulation, Neurostimulator in the spinal canal, (Blood vessel) Stent in the past 6 weeks, Ossicle prothesis, bladderstimulator, insulinpump Claustrophobia, Acute disease or acute care needed, Dialysis, Life expectancy of less than 3 months, Medically unstable or too sick to be referred to the heart failure outpatient clinic during the inclusion period, Patients with a documented diagnosis of dementia, Nursing home patients

Study design

Design

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

Recruitment

NL	
Recruitment status:	Pending
Start date (anticipated):	01-11-2007

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Enrollment:

Type:

45 Anticipated

Ethics review

Approved WMOApplication type:First submissionReview 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 CCMO ID NL19242.091.07