Clinical Magnetic Resonance First Pass Myocardial Perfusion Imaging - Choosing the optimal sequence

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The aim of this study is to directly compare two last generation FPMPI pulse sequences (EPI and SSFP) in a group of patients with suspected CAD.

Ethical review	Approved WMO
Status	Pending
Health condition type	Coronary artery disorders
Study type	Observational invasive

Summary

ID

NL-OMON31268

Source
ToetsingOnline

Brief title
NA

Condition

- Coronary artery disorders

Synonym
coronary artery disease

Research involving
Human

Sponsors and support

Primary sponsor: Vrije Universiteit Medisch Centrum
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: MRI, myocardial ischemia

Outcome measures

Primary outcome

Comparison of image quality and artifacts, intra- and interobserver variability

and diagnostic accuracy.

Secondary outcome

NA

Study description

Background summary

Magnetic resonance First pass myocardial perfusion imaging (FPMPI) is an established technique for the evaluation of myocardial perfusion. However, current pulse sequences still have some limitations (triggering or motion artifacts) and ongoing optimization of pulse sequences is required. This project focuses on two last generation sequences, SSFP and EPI, both optimized using parallel imaging.
EPI is faster, and theoretically has less motion artifacts, whereas SSFP has higher signal-to-noise and potentially more reliable semi-quantitative analysis.

Study objective

The aim of this study is to directly compare two last generation FPMPI pulse sequences (EPI and SSFP) in a group of patients with suspected CAD.

Study design

Observational study in which EPI- and SSFP-FPMPI will be done within a period of 2 weeks.

Study burden and risks

The burden is considered low: 1 extra visit for an MR examination of 20

minutes. Risks are negligible. During the study the vasodilating substance adenosine will be infused during 3 minutes, which may lead to mild and short lasting side effects that will be familiar from the first study. MRI is not radiotoxic, and harmful effects of its repeated use or of the contrast agent have not 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

All patients aged 30-70, referred for diagnostic FPMPI to the CMR department at the VU Medical Centre are study candidates.

Exclusion criteria

Severe adenosine (heart block > 1st degree), or contrast (allergy) related side effects during initial study).

Study design

Design

Study type: Observational invasive

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

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-06-2007
Enrollment:	60
Type:	Anticipated

Ethics review

Approved WMO

Application type:	First submission
Review commission:	METC Amsterdam UMC

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	NL18067.029.07