MRI Flow Offset Correction Study

No registrations found.

Ethical review	Positive opinion
Status	Recruiting
Health condition type	-
Study type	Observational non invasive

Summary

ID

NL-OMON20847

Source
NTR

Health condition

Blood flow measurement with MRI in the large vessel around the heart (aorta and pulmonary artery) show a measurement error; a velocity offset in the data.

Sponsors and support

Primary sponsor: VU University Medical Center
Source(s) of monetary or material Support: VU University Medical Center

Intervention

Outcome measures

Primary outcome

The primary study outcome parameter is the velocity offset in cm/s at the location of the aorta or pulmonary artery.

Secondary outcome

- To describe the offset error over the systems included in the study

- To test whether the static phantom offset corrections are valid, the difference between the velocity at the thorax wall and the phantom be assessed.

- The validity of offset corrections using higher order fitting, and the LPC filter.

Study description

Study objective

To validate in vivo the velocity offset correction method as published by Walker PG et al. (JMRI 3, 521 1993) such that it can assure velocity offsets < 0.6 cm/s at the ascending aorta and pulmonary artery for 2D through-plane phase contrast MRI velocity measurements at different centers and for different vendors.

Study design

There will an analysis at the end of the inclusion periode, at about 1 year.

Intervention

Observational study.

Seperate phantom measurements will be obtained after an in vivo clinical MRI scan.

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Eligibility criteria

Inclusion criteria

- Informed consent

- Sinus rhythm at CMR examination

- 2D flow acquisitions by MRI at the aorta or pulmonary artery without spatial infolding artefacts.

- MRI acquisition on MRI system by Siemens: Magnetom Avanto, VB17 or newer 1.5 T systems such; for GE: Signa Excite (HDx 15M4) or newer as the Optima MR360; and for Philips: Achieva R2.6.3 or newer as the Ingenia.

- MRI flow acquisitions with the general accepted standard settings

Exclusion criteria

- Incapacitated adults.

- Lack of a phantom measurement within the protocol specifications.

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non controlled trial
Masking:	Single blinded (masking used)
Control:	N/A , unknown

Recruitment

NL
Recruitment status: Recruiting

Start date (anticipated):	28-07-2014
Enrollment:	120
Type:	Anticipated

Ethics review

Positive opinion Date:	19-09-2014
Application type:	First submission

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
NTR-new	NL4720
NTR-old	NTR4865
Other	: None available

Study results