VIPS-MRI

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we hypothesize that VIPS-MRI can be developed into a patient friendly time efficient MRI to measure ventilation inflammation perfusion and structure without the use of medical gases or contrast

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Observationeel onderzoek, zonder invasieve metingen

Samenvatting

ID

NL-OMON24322

Bron
NTR

Verkorte titel
VIPS-MRI

Aandoening

cystic fibrosis

Ondersteuning

Primaire sponsor: Erasmus MC
Overige ondersteuning: Cystic Fibrosis Foundation

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

To validate 2D and 3D FD as technique to assess lung ventilation compared to CT and PFT outcomes related to lung ventilation.

Toelichting onderzoek

Achtergrond van het onderzoek

Novel promising MRI sequences have been developed that are possibly sufficiently sensitive to allow monitoring of structural abnormalities(12). In addition, MRI sequences have been developed that possible allow non-invasive monitoring of perfusion and ventilation(13). Finally, MRI sequences have been developed to detect lung inflammation, which could allow the monitoring of lung inflammation without the need for PET-CT or PET-MRI(14).

However, before these novel MRI sequences can be utilized routinely, to improve our monitoring options for CFLD on a wider scale, they have to be integrated into a patient-friendly time-efficient protocol that can be standardized across centers for the major MRI vendors (GE, Philips, Siemens). In addition, some further validation of these novel sequences is needed.

In 2014 we formed the ventilation, inflammation, perfusion and structure (VIPS-MRI) consortium with the ambition to jointly develop a VIPS-MRI platform that could be used across MRI vendors. The VIPS-MRI consortium includes the following centers: Erasmus MC (EMC), Rotterdam, Netherlands; Medizinische Hochschule Hannover (MHH), Hannover, Germany; Royal Hallamshire Hospital Sheffield (RHHS), Sheffield, UK and Princess Margaret Hospital (PMH), Perth, Australia.

Objective of the study

The final goal of this validation plan is to develop an MRI platform that can provide information about ventilation, inflammation, perfusion and structure (VIPS-MRI) in a single MRI examination of 30 minutes for safe and efficient monitoring of CFLD.

Doel van het onderzoek

we hypothesize that VIPS-MRI can be developed into a patient friendly time efficient MRI to measure ventilation inflammation perfusion and structure without the use of medical gases or contrast

Onderzoeksopzet

one visit

Onderzoeksproduct en/of interventie

VIPS-MRI (max 2x) and for healthy controls flow volume curve

Contactpersonen

Publiek

Erasmus MC Sophia

H Tiddens
wytemaweg 60

Rotterdam 3015 CN
The Netherlands
010 7036263

Wetenschappelijk

Erasmus MC Sophia

H Tiddens
wytemaweg 60

Rotterdam 3015 CN
The Netherlands
010 7036263

Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

CF patients

• Diagnosed with CF with sweat and genetic testing

• Age years 12-18 years

• Scheduled for biennial CT scan

• Willing and capable to perform spirometer controlled chest MRI

• Informed consent

Healthy Volunteers

• Siblings or friends of the CF participants

• Age 12-18 years (age and gender matched to CF patients)

• Willing and capable to perform spirometer controlled chest MRI

• Informed consent

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

All

• MRI contraindication (i.e. cardiac pacemaker, metallic implant, hearing aids, etc.)

• Claustrophobic

• Pregnancy

• Not willing or unable to perform MRI

CF Patients

• Recent (< 1 month) RTE with use of i.v. antibiotics

• Chronic oxygen therapy

• Any other severe comorbidities that could limit imaging

Healthy volunteers

• Recent (< 1 month) history of lung disease (i.e. pneumonia)

• Known history of chronic lung disease (i.e. asthma)

• Known history of congenital lung disease (i.e. bronchopulmonary dysplasia, tracheomalacia)

Onderzoeksopzet

Opzet

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Anders
Blindering:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	01-01-2018
Aantal proefpersonen:	16
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies

Datum:	21-11-2017
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL6618
NTR-old	NTR6948
Ander register	MEC : 2018-002

Resultaten