Non-invasive electrocardiographic mapping of the site of origin of idiopathic ventricular arrhythmias

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Non-invasive localization of the site of origin of idiopathic ventricular arrhythmias

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Cardiac arrhythmias
Study type	Observational non invasive

Summary

ID

NL-OMON38916

Source
ToetsingOnline

Brief title
NICE mapping VT

Condition

- Cardiac arrhythmias

Synonym
cardiac arrhythmias, idiopathic ventricular arrhythmias

Research involving
Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum
Source(s) of monetary or material Support: STW

Intervention

Keyword: Electrocardiographic mapping, Ventricular arrhythmias

Outcome measures

Primary outcome

1) Correct prediction of anatomical compartment and site of origin within that

compartment of ventricular ectopy by integrated electrocardiographic mapping

tool.

2) Correct depiction of endocardial (and epicardial) activation sequence

(*mapping*) of right ventricle and/or left ventricle

Secondary outcome

None

Study description

Background summary

Idiopathic ventricular arrhythmias usually originate in the outflow area of the heart. This is a complex anatomic area comprising right ventricular outflow tract, pulmonic artery, left ventricular outflow tract, aortic cusps, CS and coronary veins, mitral annulus and epicardial anterior crux. Detailed data on the site of origin obtained by a non-invasive mapping tool such as integrated electrocardiographic mapping prior to the procedure may facilitate the mapping procedure by narrowing down the number of potential anatomical structures from which the ventricular ectopy may originate and thus shorten procedure time and reduce the number of anatomical structures that will have to be mapped invasively.

Study objective

Non-invasive localization of the site of origin of idiopathic ventricular arrhythmias

Study design

Observational study utilizing additional non-invasive measurements

Study burden and risks

Patients will have to undergo one additional extended electrocardiographic registration by means of a 64-electrode set. The cardiac MRI - that is routinely obtained in the work-up for radiofrequency ablation of idiopathic ventricular ectopy - will be utilized for reconstruction of the cardiac and thoracic geometry. Since no additional invasive procedures are required, there is no additional risk for the patient. Potential benefit of participating is that beforehand more information is available on the endocardial activation and epicardial activation within the heart and that the mapping for the site of origin can be conducted more effectively.

Contacts

Public
Academisch Medisch Centrum

Meibergdreef 9
Amsterdam 1105AZ
NL
Scientific
Academisch Medisch Centrum

Meibergdreef 9
Amsterdam 1105AZ
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

Patients scheduled for elective radiofrequency catheter ablation of idiopathic left or right ventricular tachycardia or idiopathic left or right ventricular extrasystoly.

Exclusion criteria

1) Unwillingness to participate
2) Not able to undergo MRI scanning (cardiac device, claustrophobia)

Study design

Design

Study type: Observational non invasive

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	12-02-2015
Enrollment:	15
Type:	Actual

Ethics review

Approved WMO

Date:	02-09-2013
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	NL45872.018.13