Functional studies in different forms of hyperkinetic movement disorders

Published: 14-01-2008
Last updated: 11-05-2024

The purpose of this study is to obtain a better understanding of the pathophysiological substrate of jerky movements, with a focus on psychogenic jerks, myoclonic jerks in Myoclonus Dystonia, and tics in Gilles de la Tourette syndrome.

Ethical review	Approved WMO
Status	Pending
Health condition type	Movement disorders (incl parkinsonism)
Study type	Observational invasive

Summary

ID

NL-OMON32146

Source
ToetsingOnline

Brief title
Functional studies in hyperkinetic movement disorders

Condition

- Movement disorders (incl parkinsonism)
- Psychiatric disorders

Synonym
Jerky movement disorders, motor tics

Research involving
Human

Sponsors and support

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

Intervention

Keyword: fMRI, Gilles de la Tourette Syndrome, Jerky movement disorders, Myoclonus Dystonia

Outcome measures

Primary outcome

The purpose of this study is to obtain a better understanding of the pathophysiological substrate of jerky movements. We want to identify brain activations and areas involved with EMG-fMRI that differentiate between MD, GTS and psychogenic movement disorders and we want to identify different activation patterns with EEG-EMG analysis techniques. All findings will be analyzed with respect to common psychiatric co-morbidity, as objectified with standardized psychiatric scales. The final goal is to use these functional studies for future clinical practice to discriminate psychogenic and *neurological* hyperkinetic movement disorders and guide treatment strategy.

Secondary outcome

Not applicable.

Study description

Background summary

In movement disorders practice, it is often difficult to determine the origin of jerky movements. The differential diagnosis ranges from psychogenic origin to genetically inherited disorders. However, all these movements are often associated with psychiatric co-morbidity, complicating the distinction.

Study objective

The purpose of this study is to obtain a better understanding of the pathophysiological substrate of jerky movements, with a focus on psychogenic

jerks, myoclonic jerks in Myoclonus Dystonia, and tics in Gilles de la Tourette syndrome.

Study design

The study will entail three parts. In an inventory study, the amount of psychogenic jerks diagnosed at our tertiary referral movement disorders outpatient clinic as apposed to organic jerks will be clarified. Moreover, it will provide inside into the follow up of the patients after the diagnosis psychogenic movement disorder is made. The clinical and psychiatric part of this study will provide more information on motor symptoms and psychiatric co-morbidity (both using standardized scales) and will aid in interpreting the findings of functional studies. In a functional study, several existing techniques will be used in a novel way: electromyography during functional magnetic resonance imaging (EMG-fMRI) and combined EEG-EMG.

Study burden and risks

All clinical, psychiatric and functional tests are generally considered to be a small burden and risk for the participants.
In case of adverse events or unexpected, unrelated pathological findings, we will inform the general practitioner of the patient instead of the patient directly. Findings of our study on it*s own not benefit individual patients directly. Our study is group-related. We expect all groups of participant to benefit equally of the implementation of results.

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

Group 1: Psychogenic movement disorders: We will include patients with *clinically established psychogenic movement disorders*, as defined by Hinson and colleagues and Williams and colleagues . This means movements incongruent with organic disease or inconsistent symptoms, in addition to the presence of other false neurological signs or multiple somatisations.
Group 2 : Gilles de la Tourette: DSM-IV diagnosis plus jerky movements of limbs.
Group 3: MD patients with proven DYT 11 mutation and DYT11 negative MD patients (the latter for EMG-fMRI only).
All patients should have jerky movements frequently.

Exclusion criteria

General exclusion criteria are neurological co-morbidity and the use of substance and/or medication that may influence study results. For the fMRI-EMG study extra exclusion criteria apply. Participants should not have metal implants (e.g. pacemaker), nor should they be pregnant. Moreover, participants with claustrofobia are excluded from fMRI investigation.

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):	01-01-2008
Enrollment:	100
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	NL20159.018.07