FSHD-FOCUS: Facioscapulohumeral muscular dystrophy; (epi)genetic and environmental factors influencing disease severity

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Ethical review	Approved WMO
Status	Recruiting
Health condition type	Musculoskeletal and connective tissue disorders congenital
Study type	Observational invasive

Summary

ID

NL-OMON41011

Source
ToetsingOnline

Brief title
FSHD-FOCUS

Condition

- Musculoskeletal and connective tissue disorders congenital
- Muscle disorders

Synonym
FSHD (facioscapulohumeral muscular dystrophy), Landouzy Dejerine disease

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Sint Radboud
Source(s) of monetary or material Support: Prinses Beatrix Fonds

Intervention

Keyword: (epi)genetics, environmental factors, FSHD (facioscapulohumeral muscular dystrophy), phenotype

Outcome measures

Primary outcome

Primary outcomes will be (epi)genetic differences between asymptomatic, mild and severely affected patients assessed by genomic expression profiling. Also, outcomes on questionnaires on environmental factors will be compared for different disease severities. Disease severity will be assessed using a clinical severity score (Ricci-score).

Secondary outcome

Secondary outcomes are degree of muscle weakness using MRC-gradation, motor function measure, assessment of facial weakness, forced vital capacity using spirometry and 6-minute walk test. Other secondary outcomes are scores on the following questionnaires: FSHD history, SIP68, FAI, McGill pain questionnaire, CIS-fatigue, questionnaire on falling. Furthermore, we assess the fat fraction and inflammation in muscles of the leg using MRI-scans.

Study description

Background summary

Facioscapulohumeral muscular dystrophy (FSHD) is an autosomal dominant inherited progressive muscular dystrophy, characterized by asymmetrical

weakness and wasting of facial, shoulder girdle and upper arm muscles, followed by weakness of the muscles of the trunk and the lower extremities. Over the last few years, our knowledge on the pathogenic mechanism in FSHD has expanded. However, we have not yet explained the variability in onset, disease course and penetrance, nor the asymmetric nature of the disease. Our hypothesis is, that other (epi)genetic and environmental or lifestyle factors must be involved in this disease. It is important to identify these factors, as some of them may be considered as *natural moderators* of the disease and may contribute to development of new treatment strategies. If such a treatment becomes available, well controlled clinical trials will be warranted. Moreover, in the process of unraveling the pathogenic mechanism of FSHD, new questions will arise. For the purpose of future research, this study will provide a cohort of well-documented FSHD patients. By establishing a disease specific biobank containing biomaterial as well as clinical data of FSHD patients, future research will be facilitated and accelerated.

Study objective

The primary objective is to identify (epi)genetic and environmental disease modifying factors that contribute to the variable clinical phenotype of FSHD, in order to support the future development of new treatment strategies for FSHD.
The secondary objectives are:
1. To describe the phenotype and genotype of Dutch FSHD patients in order to obtain a well-documented cohort of FSHD-patients to be recruited for future clinical trials.
2. To establish a disease oriented biobank for processing and storage of biospecimen and health information of FSHD patients in order to facilitate future research.

Study design

Explorative, cross-sectional, observational study.

Study burden and risks

Participants will visit the outpatient clinic at the department of neurology. Their medical history will be taken, they will undergo a clinical examination and they will fill out questionnaires online (at home). Blood samples will be collected for DNA- and RNA-analysis and for storage of blood and DNA/RNA in a biobank for future research. Also, participants will undergo a muscle biopsy of the leg or a skin biopsy unless they object against this procedure. Another visit will be planned for performing a magnetic resonance imaging (MRI) of muscles of one upper leg. Complications of muscle or skin biopsies are very uncommon and include hematoma and local hypoesthesia.

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

1. All FSHD patients of 18 years and older with
- genetically proven FSHD or;
- clinical FSHD diagnosis and who give permission for genetic testing to confirm the diagnosis
2. Family members of FSHD patients without symptoms of FSHD who give permission for genetic testing for FSHD; i.e.non-penetrant FSHD patients

Exclusion criteria

Incapacitated persons

Study design

Design

Study type: Observational invasive

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

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	01-08-2014
Enrollment:	200
Type:	Actual

Ethics review

Approved WMO

Date:	18-06-2014
Application type:	First submission
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

Approved WMO

Date:	29-06-2015
Application type:	Amendment
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

Approved WMO

Date:	30-11-2016
Application type:	Amendment
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

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	NL48204.091.14