Molecular basis of refractory constipation in children

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Gastrointestinal tract disorders congenital
Study type	Observational invasive

Summary

ID

NL-OMON35506

Source
ToetsingOnline

Brief title
Molecular basis of childhood constipation

Condition

- Gastrointestinal tract disorders congenital
- Gastrointestinal motility and defaecation conditions

Synonym
constipation, defecation disorder

Research involving
Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum
Source(s) of monetary or material Support: Ministerie van OC&W,stichting Steun Emma;stichting Kindermotiliteit

Intervention

Keyword: childhood, constipation, molecular, total exome sequencing

Outcome measures

Primary outcome

The primary outcome is the identification of genes associated with childhood refractory constipation.

Secondary outcome

The secondary outcome will consist of a thorough description of the clinical characteristics, the phenotype, of children with refractory constipation responding to sacral neuromodulation therapy.

Study description

Background summary

In children, the reported prevalence of functional constipation varies between 0.7% to 29.6%. Genetic factors are very likely to play an important role in the pathophysiology of childhood constipation. However, linkage studies, association studies and direct gene sequencing have failed to identify mutations in specific genes associated with constipation. This is likely due to the large heterogeneity of functional constipation in children.

Study objective

The aim of the present study is to identify genes associated with functional constipation in a homogeneous subgroup of children responding to sacral neuromodulation by performing whole exome sequencing in both children and their parents and to subsequently confirm this in a larger group of patients by molecular analyses. The second aim is to provide a detailed description of the clinical characteristics of children with refractory constipation.

Study design

Total exome sequencing will be performed in at least 4 children with refractory constipation responding to sacral neuromodulation therapy and their parents.

Total exome sequencing will be followed by Sanger sequencing of suggestive genes. Sanger sequencing will also be performed in other participants in order to confirm the findings. Clinical information will be obtained by a questionnaire and from files.

Study burden and risks

All participants will be requested to donate 10 mL of peripheral blood for DNA extraction. If blood donation can be combined with a regular laboratory assessment, participants will be requested to donate additonally 5 mL of peripheral blood. Clinical information of participating children is will be collected from their files and physicians after consent of the participant and his/her parents . All participating parents of affected children will be asked to fill out a questionnaire with specific questions about symptoms of defecation disorders and their health in general.
The risks and burden of venous blood drawing are minimal for both children and adults.

Contacts

Public
Academisch Medisch Centrum

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adolescents (12-15 years)
Adolescents (16-17 years)
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

Inclusion criteria for the indexpatients:
- Patients diagnosed with functional constipation not responding to maximal conservative treatment (laxatives, enemas, bowel cleansing) for at least 6 months prior to sacral neuromodulation (SNM) therapy, but responding to SNM therapy.
-Patients aged 12-18 years at time of the implantation of the sacral neuromodulator.;Inclusion Criteria for parents of indexpatients:
-Fathers and mothers of indexpatients.;Informed consent is needed for all individuals to be included. Informed consent will also be asked for by the parents as participating children will be aged 12 to 18 years.

Exclusion criteria

Exclusion criteria for the indexpatients
- Patients suffering from organic pathology causing constipation.
-Patients with a history of large bowel surgery, congenital anorectal malformations or neurological disease.
-Patients not able to read and understand the written information. ;Exclusion criteria for the parents of indexpatients
-Individuals not able to read and understand the written information.

Study design

Design

Study type: Observational invasive

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	13-02-2012
Enrollment:	30
Type:	Actual

Ethics review

Approved WMO

Date:	16-01-2012
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	NL37602.018.11