Functional investigation of a variant in ARGHAP18 in a family with mastocytosis

Published: 15-02-2022
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To investigate the functional consequences of the found variant in ARGHAP18 in mast cell behaviour.

Ethical review	Approved WMO
Status	Pending
Health condition type	White blood cell disorders
Study type	Observational invasive

Summary

ID

NL-OMON51623

Source
ToetsingOnline

Brief title
ARHGAP18 in familial mastocytosis

Condition

- White blood cell disorders

Synonym
hereditary, mastocytosis

Research involving
Human

Sponsors and support

Primary sponsor: Erasmus MC, Universitair Medisch Centrum Rotterdam
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: ARHGAP18, mastocytosis

Outcome measures

Primary outcome

In vitro assays using the cultured mast cells:

- Cell proliferation rate

- YAP phosphorylation and nuclear translocation

- CTGF production upon stimulation with thrombin

Secondary outcome

not applicable

Study description

Background summary

A germline variant in the gene for ARGHAP18 was found in a family with mastocytosis. It is hypothesized that this variant leads to increased proliferation and/or survival of mast cells, rendering them vulnerable to second mutations, i.e. the D816V KIT mutation which ultimately causes the clinical phenotype mastocytosis.

Study objective

To investigate the functional consequences of the found variant in ARGHAP18 in mast cell behaviour.

Study design

Primary human mast cells will be cultured from CD34+ myeloid progenitors cells derived from peripheral blood of family members with and without the ARGHAP18 variant.

Study burden and risks

The patients will have to provide 10 tubes of peripheral blood through venapunction. The burden and risks associated with this procedure are very low. The patients might benefit directly from this study because it will give insight in their pedigree*s risk of mastocytosis and other diseases, and it

might even lead to new therapeutic options.

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

We are planning to include the two adult members of the family and both parents of the index patient (see family tree below).

Exclusion criteria

Not applicable

Study design

Design

Study type: Observational invasive

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

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	23-02-2022
Enrollment:	4
Type:	Anticipated

Ethics review

Approved WMO

Date:	15-02-2022
Application type:	First submission
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

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	NL79369.078.21