Identifying key immunological and molecular pathways that drive disease exacerbation in atopic dermatitis

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Ethical review	Approved WMO
Status	Will not start
Health condition type	Epidermal and dermal conditions
Study type	Observational invasive

Summary

ID

NL-OMON42484

Source
ToetsingOnline

Brief title
Immunological and molecular pathways in atopic dermatitis

Condition

- Epidermal and dermal conditions

Synonym
atopic eczema, eczema

Research involving
Human

Sponsors and support

Primary sponsor: MedImmune Biotech
Source(s) of monetary or material Support: MedImmune

Intervention

Keyword: atopic dermatitis, biomarkers, immunological pathways, molecular payhways

Outcome measures

Primary outcome

- The presence of a molecular signature of disease exacerbation in the skin and peripheral blood of patients with moderate to severe atopic dermatitis will be assessed using the following parameters:

- Composite scores for disease activity and treatment response and patient reported outcome measures (PROMS):

o The Six Area, Six Sign Atopic Dermatitis (SASSAD)

o SCORing AD (SCORAD)

o Eczema Area and Severity Index (EASI)

o Investigator Global Assesment (IGA)

o Patient Oriented Eczema Measure (POEM)

o Self-assessed EASI (SA-EASI)

- Biomarkers measured in serum and DBS (Luminex: panel of biomarkers including TARC, MDC, PARC, IL-22, sE-selectin, sIL-2R and IL-16 based on our previous findings and somalogics: http://www.somalogic.com/)

- Molecular analysis of gene expression from peripheral blood mononuclear cells (PBMC)

- Molecular analysis of gene expression from skin biopsies

- Immunohistochemistry skin biopsies

Secondary outcome

*Define the propensity of S. aureus colonization/infection of patients and

association with disease exacerbation

*Define the association with asthma and how severity of atopic dermatitis

correlates with asthma severity

Study description

Background summary

Atopic dermatitis (AD) is the most common chronic inflammatory skin disease. From the patient*s perspective, AD is characterized by itch, pain, sleep loss, and shame, resulting in a substantially impaired quality of life. Although the pathogenesis of AD is not fully understood, it is thought to arise from a combination of genetic, epigenetic, and environmental factors. Using a so-called *systems medicine approach* we propose to unravel these complex interactions in order to better understand the specific pathways leading to disease.

Study objective

The two main objectives are the identification of molecular and clinical signatures that can serve as diagnostic and/or severity-of-disease markers for AD in flare and remission. And the identification of key immunological and molecular pathways that are associated with disease exacerbation, and thereby identify novel putative therapeutic targets.

Study design

Longitudinal observational study, where blood samples, skin biopsies, dried blood spots, skin swabs and clinical parameters will be prospectively collected for a duration of one year per patient, and the data will be analysed using the systems medicine approach.

Study burden and risks

Study participants with a diagnosis of AD will be asked to donate blood samples and fill in quiestionairres during 7 control visits to the outpatient clinic.The blood draw will coincide with a blood draw that is necessary for clinical purposes.
During four of these visits skin swabs, skin strips, and a dried blood spots will be obtained.
During three of these visits a set of two 4mm biopsies (lesional and non-lesional AD skin) will be performed.
When the patient experiences a flare during the follow-up of one year, that does not coincide with one of the standard visits, the patient will be offered an extra visit, with the additional option of donating an extra set of biopsies.

The burden of participation relies mainly on undergoing skin biopsies, dried blood spots, extra blood draws and filling in the questionnaires. Performing a skin biopsy entails a slight risk of haemorrhage and infection. Over the past years, no SAE's were observed in patients that had biopsies taken for the Biobank skin. A small scar at the site of biopsy will gradually fade in colour over time. No biopsies will be taken from the face, neck or the cleavage regions. Performing a fingerprick for collecting a DBS entails a minimal risk of infection.
Patients do not directly benefit from participation.

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

* adults (*18 years of age);and for:
* group a (n<=30): diagnosis of AD (according to the criteria of Hanifin and Raijka) with a SASSAD score over 15 at time of inclusion, with an uncontrolled AD using a maintenance dose of local topical steroids as mentioned in the outpatient clinic protocol. These patients need oral immunosuppressive drugs to control their AD
*group b(n<=30): diagnosis of AD (according to the criteria of Hanifin and Raijka) with a SASSAD score over 15 at time of inclusion, with a controlled AD using a maintenance dose of local topical steroids as mentioned in the outpatient clinic protocol
*group c(n<=15): diagnosis of AD (according to the criteria of Hanifin and Raijka) with a SASSAD score <15 at time of inclusion
*group d (n<=15): healthy participants without a history of AD, allergic rhinitis or asthma.

Exclusion criteria

* on systemic therapy at time of recruitment
* previous receipt of any investigational agent within 4 weeks prior to recruitment or within 5 half-lives of the investigational agent, whichever is longer
*evidence of other skin conditions, including, but not limited to, T-cell lymphoma or allergic contact dermatitis
*not willing to be biopsied;group d: a history of AD, allergic rhinitis or asthma.

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:	Will not start
Enrollment:	90
Type:	Anticipated

Ethics review

Approved WMO Date:	04-11-2015
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

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	NL52918.041.15