In vitro inhibition of STAT3 phosphorylation in psoriasis, Crohn's and SLE patients.

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Setup method for detection of STAT3 phosphorylation in human blood derived from patients with various chronic inflammatory diseases.Test the effect of new compounds on this phosphorylation process.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Gastrointestinal inflammatory conditions
Study type	Observational invasive

Summary

ID

NL-OMON35388

Source
ToetsingOnline

Brief title
Inhibition of STAT3 phosphorylation in (auto)immune disorders

Condition

- Gastrointestinal inflammatory conditions
- Autoimmune disorders
- Epidermal and dermal conditions

Synonym
chronic inflammatory disorders

Research involving
Human

Sponsors and support

Primary sponsor: TNO

Source(s) of monetary or material Support: Farmaceutisch bedrijf

Intervention

Keyword: autoimmunity, in vitro, phosphorylation, STAT3

Outcome measures

Primary outcome

- Measurement of STAT3 phosphylation in different in vitro conditions in human

blood. Mainly by Facs analysis.

- Inhibition of the phosphorylation by various test compounds.

- Measurement of IL-23 in serum of patients.

Secondary outcome

- Expression of inflammatory mediators and surface markers in blood cells after

and during pSTAT3 phosphorylation.

Study description

Background summary

Psoriasis, Crohn's disease and SLE chronic inflammatory diseases with relatively high incidence and which are are a high burden for the quality of life. The current treatment methods are are not sufficient or show side effects. The development and validation of nieuwe therapeutic strategies is therefore warrented and should involve use of human material. The TNO life sciences has gained extensive experience with the use of humane blood cells in in vivo, ex vivo and in vitro pre-clinical testing. At this point, TNO wants to use human blood to setup and study important signaling pathways in human blood cells. In this particular study, we will focus on the fosforylation of a transcription factor STAT3.

Additional, we will investigate whether new compounds (developed by a pharmaceutical company) have an effect on this proces and therefore could potentially be a new therapeutic strategy.

Scienticifc background information is attached in Appendix 2. Because this is a

pre-clinical study, patients will, for now, not benifit directly from this research.

Study objective

Setup method for detection of STAT3 phosphorylation in human blood derived from patients with various chronic inflammatory diseases.

Test the effect of new compounds on this phosphorylation process.

Study design

Pilot: Setup and validate the detection method
2-4 healthy controls/2-4 psoriasis patients/ 2-4 Crohns patients/ 2-4 SLE patients will be recruited and 5 tubes (of 10cc) blood will be collected. Blood will stimulated ex vivo using several protocols and the amount of phosphorylated STAT3 will be determined by mainly use of FACS analysis.

Main study: test the effect of new compounds on the STAT 3 phosphorylation.
8-11 healthy controls/ 8-11 psoriasis patients/ 8-11 Crohns patients/8-11 SLE patients will be recruited and 5 tubes of (10cc) blood will be collected. Using the protocol optimized in the pilot study these blood samples will be used to test the effect of 2-4 new compounds.

Study burden and risks

The burden and risk are considered to be very low as it entails only one venopuncture.

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

Psoriasis patients: Adults (m/f) with a mild form of psoriasis vulgaris (PASI score of maximal 6). Patients are allowed to use local corticosteroids or ointments to prevent dry skin
Crohn's: Adults (m/f) diagnosed with Crohn's disease. Patient must have experienced active disease in two years.
SLE: Adults (m/f) in remission or mild flare SLEDAI<5 .

Exclusion criteria

Psoriasis and Crohn's disease: patients have not received systemic treatment in last 2 months(methotrexate,cyclosporin A, corticosteroids, anti-TNF treatments) and no NSAIDS , iin last 6hours.
SLE: Patients have a SLEDAI <5. patients have not received systemic treatment in last 2 months(methotrexate,cyclosporin A, corticosteroids, anti-TNF treatments) and no NSAIDS , iin last 6hours.;Gender or age of the adults are not exclusion criteria (see Appendix 2).

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:	Recruitment stopped
Start date (anticipated):	25-10-2011
Enrollment:	60
Type:	Actual

Ethics review

Approved WMO Date:	15-11-2011
Application type:	First submission
Review commission:	METC Brabant (Tilburg)
Approved WMO Date:	04-07-2012
Application type:	Amendment
Review commission:	METC Brabant (Tilburg)
Approved WMO Date:	20-08-2012
Application type:	Amendment
Review commission:	METC Brabant (Tilburg)

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	NL38405.028.11