Role of the cholesteryl ester transfer protein (CETP) in retinoid-associated dyslipidemias in patients treated for cuteanous disorders.

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To establish the link between retinoid treatment, lipid profile and CETP activity and expression in patients using retinoic acid derivatives against acne (Isotretinoin (Roaccutane)) or psoriasis (Acitretin (Neotigason)). The analyses will be carried…

Ethical review	Approved WMO
Status	Pending
Health condition type	Lipid metabolism disorders
Study type	Observational non invasive

Summary

ID

NL-OMON29950

Source
ToetsingOnline

Brief title
CETP/retinoids

Condition

- Lipid metabolism disorders

Synonym
dyslipidemia, hypoHDLemia

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen

Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: CETP, cutanous disorders, dyslipidemia, retinoids

Outcome measures

Primary outcome

- CETP activity : fluorescent kinetics in microplates

- Plasma CETP concentration : enyme-linked immunosorbent assay (ELISA)

Secondary outcome

- Plasma lipid levels (cholesterol, phospholipids, triglycerides): enzymatic

assays

- Cholesterol and triglyceride distribution between lipoprotein classes, and

HDL size : fast protein liquid chromatography (FPLC) non-denaturing

electrophoresis.

Study description

Background summary

In human plasma, cholesterol is carried by distinct lipoprotein classes such as VLDL, LDL and HDL. Epidemiological studies have demonstrated that the incidence of atherosclerosis correlates positively with VLDL and LDL, and negatively with HDL. The human cholesteryl ester transfer protein (CETP) promotes accumulation of cholesterol in the pro-atherogenic VLDL and LDL at the expense of the anti-atherogenic HDL. Two compounds recently showed their efficiency in blocking CETP activity in humans, leading to potentially beneficial changes in the plasma lipoprotein profile. These data strongly support the use of CETP inhibitors as a new way to reduce the atherogenic risk. However, the use of CETP inhibitors is more likely to target subjects with a pro-atherogenic lipid profile such as hyperlipidemia.
Marked lipid disorders can be observed in patients treated with retinoids. Retinoid-based treatments are mostly used for cutaneous disorders (acne, psoriasis). The use of retinoids in these subjects can lead to marked

elevations of plasma triglyceride levels (higher VLDL), to a rise in LDL-cholesterol and a decrease in HDL-cholesterol, thus requiring a strict monitoring of plasma lipid profile during the treatment. The altered balance between LDL and HDL cholesterol in these patients might be due to an increase in CETP activity. Indeed, the CETP gene possesses some response elements that are targeted by retinoic acid derivatives. Thus the deleterious lipid profile in these patients could be partly due to an increase in CETP activity in response to a transcriptional effect of retinoids on the CETP gene and to the elevated amounts of VLDL substrates (the main acceptors for cholesterol from HDL). Moreover, some in vitro data suggested that the presence of retinoic acid derivates plasma can directly enhance CETP activity.

Study objective

To establish the link between retinoid treatment, lipid profile and CETP activity and expression in patients using retinoic acid derivatives against acne (Isotretinoin (Roaccutane)) or psoriasis (Acitretin (Neotigason)). The analyses will be carried out on blood samples taken before, and during retinoid treatment.

Study design

Two blood samples (10ml) will be drawn after an overnight fast from patients who are prescribed a regular retinoid-based treatment against acne or psoriasis:
- first sample before treatment
- second sample at 12 weeks of treatment.

Study burden and risks

Patients follow an overnight fast before blood sampling. Blood will be drawn as routinely performed by a specialist: no risk.

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

People suffering from severe forms of acne or psoriasis requiring a treatment with Roaccutane or Neotigason, but who did not start with the treatment yet.

Exclusion criteria

Treatment with hypolipidemic or antidiabetic drugs.
Hepatic disorders
Alcoholism
Diabetes
Acute infection

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled

Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-09-2006
Enrollment:	25
Type:	Anticipated

Ethics review

Approved WMO

Date:	14-11-2006
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

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	NL11360.042.06