The molecular mechanism of cholestatic pruritus

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The objective of this study is to identify direct or indirect pruritogens accumulating during cholestasis and to analyze the involved neuronal signaling pathways leading to the sensation of itch.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Hepatobiliary neoplasms malignant and unspecified
Study type	Observational non invasive

Summary

ID

NL-OMON31450

Source
ToetsingOnline

Brief title
Pruritus

Condition

- Hepatobiliary neoplasms malignant and unspecified

Synonym
ICP (Intrahepatic cholestasis of pregnancy), PBC (primary biliary cirrhosis), PSC (primary sclerosing cholangitis)

Research involving
Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: cholestasis, patients, pruritus

Outcome measures

Primary outcome

Parameters measured in serum: bile acids, bile acid metabolites, progesterone

metabolites, estrogen metabolites, possible (in)direct pruritogens, standard

serum liver tests

Secondary outcome

not applicable

Study description

Background summary

Pruritus (= itch) is a common symptom of many different hepatobiliary diseases being mostly associated with cholestasis. Pruritus is defined as an unpleasant sensation with the desire or reflex to scratch the affected area of skin. Depending on the severity of pruritus, quality of life may be remarkably affected causing psychovegetative disorders and may even lead to suicide. Thus, liver transplantation has been considered in cases of intractable pruritus. Medical and interventional treatment options of cholestatic pruritus are limited, reflecting the low pathophysiological understanding of this common symptom on molecular basis. Therefore it would be eligible to map out the mechanisms leading to itch, enabling the development of a more effective itch therapy to the patient. In the last decade more information has become available on potential mechanisms that lead to itch perception. While it has become clear that pain and itch are transduced by separate nerve fibers, it is also very well established that itch and pain perception are closely intertwined processes. Thus, pain stimuli repress itch sensations, e.g. scratching of the itching skin. Vice versa, in case pain signallling is inhibited, e.g. by opioids or anaesthetics, pruritus may occur or aggravate. It is our hypothesis that during cholestasis compounds that are normally excreted into bile accumulate in plasma and act as direct or indirect pruritogens by affecting receptor mediated signaling in neurons. It is our aim to identify these compounds as well as the involved neuronal signaling

pathways.

Study objective

The objective of this study is to identify direct or indirect pruritogens accumulating during cholestasis and to analyze the involved neuronal signaling pathways leading to the sensation of itch.

Study design

This is an open study carried out in 30 cholestatic patients and 30 cholestatic patients with pruritus.

Study burden and risks

not applicable

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

Male or female patient with cholestatic liver disease, adult, able to give fully informed written consent;
gamma-glutaryl-transpeptidase > 1.5 above normal, alkaline phosphatase > 1.5 above normal, bilirubin normal or above normal

Exclusion criteria

Other causes of itch than cholestatic liver disease

Study design

Design

Study type: Observational non invasive

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	22-06-2007
Enrollment:	60
Type:	Actual

Ethics review

Approved WMO

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	NL21233.018.07