Regulation of Apoptosis in Cultured Nasal Airway Epithelial Cells of Children

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To examine the apoptotic response of isolated and cultured airway epithelial cells of infants to a wide variety of cytotoxic agents and potential apoptotic stimulants ex vivo. These include oxygen, nitric oxide, peroxynitrite, cigarette smoke…

Ethical review	Approved WMO
Status	Pending
Health condition type	Respiratory disorders NEC
Study type	Observational invasive

Summary

ID

NL-OMON31297

Source
ToetsingOnline

Brief title
n.a.

Condition

- Respiratory disorders NEC

Synonym
programmed celdeath

Research involving
Human

Sponsors and support

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

Intervention

Keyword: Apoptosis, Nasal Epithelium

Outcome measures

Primary outcome

Evidence for apoptosis: caspase-3 activity, annexin-V binding and morphological studies.

Apoptotic pathways: RNA of the Bcl-2 and IAP family of pro- and anti-apoptotic factors, RNA and protein analysis of Fas/FasL and caspase-8 and -9 activity.

Secondary outcome

n.a.

Study description

Background summary

Apoptosis, a form of programmed cell death, plays a key role in many human disorders. Disruption of the tight regulation of apoptosis in the lungs of infants and young children may therefore contribute to both short and long term organ dysfunction. Enviromental factors and patient dependent parameters can influence apoptosis. Current studies on this subject collect airway epithelium using endotracheal cytobrushing in intubated patients. Simple nasal cytobrushing might be an easier way to collect patient samples. In this study we propose to perform ex vivo experiments on apoptosis with isolated and cultured nasal airway epithelial cells of children.

Study objective

To examine the apoptotic response of isolated and cultured airway epithelial cells of infants to a wide variety of cytotoxic agents and potential apoptotic stimulants ex vivo. These include oxygen, nitric oxide, peroxynitrite, cigarette smoke extract and viral and bacterial respiratory pathogens.To compare these findings with the results of similar experiments on lung epithelium.

Study design

Observational study ex vivo.

Study burden and risks

Sample collection will be performed by nasal cytobrushing. No complications of any kind are expected from the sample collection procedures and patient burden will be minimal. Because this study focuses on the regulation of apoptosis of the respiratory epithelium of children only subjects in the specified age group can be included. The subjects have no direct potential benefit of participation, but the results of this study are beneficial to children in this age group in general.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Children (2-11 years)

Inclusion criteria

age 2-24 months
patient of: Emma Children's Hospital (outpatient clinic / ward)

Exclusion criteria

History of pulmonary disorder
No permission of caretakers

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):	15-04-2007
Enrollment:	30
Type:	Anticipated

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	NL17072.018.07