Carbon monoxide and Compound A measurements with desflurane and sevoflurane anesthesia in humans: an observational study.

No registrations found.

Ethical review	Positive opinion
Status	Recruitment stopped
Health condition type	-
Study type	Observational non invasive

Summary

ID

NL-OMON20166

Source
NTR

Brief title
N/A

Health condition

Carbon monoxide, compound A, Anesthesia, Carbon dioxide absorbents, Desiccation. Koolmonoxide, Anesthesie, Kooldioxide absorbers, Uitdroging.

Sponsors and support

Primary sponsor: VU University Medical Center
Source(s) of monetary or material Support: VU University Medical Center

Intervention

Outcome measures

Primary outcome

Amount of carbon monoxide or compound A produced.

Secondary outcome

N/A

Study description

Background summary

All modern vapor anesthetics are capable of carbon monoxide (CO) production as a result of interaction with desiccated strong base containing carbon dioxide absorbents. In desiccated absorbents, desflurane produces the highest concentrations of CO. Sevoflurane is known to produce the nephrotoxic compound A (CA) independent of the water content of the carbon dioxide absorbent. The purpose of this study is to register the average CO concentrations in forty patients receiving desflurane or sevoflurane anesthesia after implementation of a safety protocol adapted from Woehlck et al., developed to prevent desiccation of the strong base containing absorbent Drägersorb 800 Plus® while still maintaining the possibility of flushing the ventilating circuits of the anesthesia machines with a flow of air.

Study objective

The purpose of this study is to register the average CO concentrations in forty patients receiving desflurane or sevoflurane anesthesia after implementation of a safety protocol to prevent desiccation of the strong base containing absorbent Drägersorb 800 Plus®.

Study design

N/A

Intervention

Desflurane or sevoflurane anesthesia.

Contacts

Public
NKI,
Plesmanlaan 121
C. Keijzer
Amsterdam 1066 CX

The Netherlands
+31 20-5129111
Scientific
NKI,
Plesmanlaan 121
C. Keijzer
Amsterdam 1066 CX
The Netherlands
+31 20-5129111

Eligibility criteria

Inclusion criteria

1. Non-smoking patients;

2. American Society of Anesthesiologists physical status class 1 to 3 scheduled for a surgical procedure that would last at least ninety minutes.

Exclusion criteria

1. Younger than 18 years of age;

2. Suffering from terminal renal failure.

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non controlled trial
Masking:	Open (masking not used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	01-08-2005
Enrollment:	40
Type:	Actual

Ethics review

Positive opinion

Date:	23-05-2007
Application type:	First submission

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
NTR-new	NL955
NTR-old	NTR981
Other	:
ISRCTN	ISRCTN84188372

Study results