Endotracheal suctioning: open or closed?

Gepubliceerd: 18-09-2006 Laatst bijgewerkt: 18-08-2022

Cross-transmission of antibiotic-resistant pathogens can be prevented by using closed suction systems (CSS) instead of open suction systems (OSS) in mechanically ventilated ICU patients.

Ethische beoordeling	Positief advies
Status	Werving nog niet gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON22462

Bron
Nationaal Trial Register

Verkorte titel
ES-trial

Aandoening

In mechanically ventilated patients, endotracheal suctioning will be performed when indicated. During two 6-month periods all ES procedures will be performed with either OSS or CSS. After 6 months, 1 month of wash out/wash in is planned, during which the system is changed.

Ondersteuning

Primaire sponsor: None
Overige ondersteuning: ZonMw, Program Prevention, project number 6230.0037

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Occurrence of cross-transmission (primary endpoint), defined as acquired colonization with a

genetically identical pathogen with an epidemiological linkage to a potential source patient.

Toelichting onderzoek

Achtergrond van het onderzoek

Cross-transmission (patient to patient spread) of antibiotic-resistant bacteria frequently occurs in intensive care units (ICUs). Among mechanically ventilated patients the respiratory tract is a preferential site for colonization with such pathogens. For these patients, endotracheal suctioning (ES) is an essential and frequently performed procedure. Yet, disconnection of the ventilation system and endotracheal tube during ES exposes colonized airways and contaminated material to open air with ongoing ventilation, and creates an optimal situation for air-borne spread of pathogens and cross-transmission. Controlling spread of antibiotic-resistant pathogens is of utmost importance in ICUs.
Nowadays, two systems are available for ES: the single use open suction system (OSS) and the 'newer' multiple use closed suction system (CSS). CSS is increasingly used due to presumed patient benefits with regard to adverse physiolgic events and outcome, though we could not confirm these claims upon a systematic review. Importantly, the effects of CSS on reducing cross-transmission have never been evaluated.

Doel van het onderzoek

Cross-transmission of antibiotic-resistant pathogens can be prevented by using closed suction systems (CSS) instead of open suction systems (OSS) in mechanically ventilated ICU patients.

Onderzoeksproduct en/of interventie

Endotracheal suctioning as indicated, according to a protocol, with either CSS or OSS.

Contactpersonen

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

All adult ICU patients receiving MV will be included and, during 6 months, be subjected to the same ES-procedure.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

No exclusion criteria. Preference of ES system is often based on assuptions, there is currently no scientific evidence available to prefer one system over the other.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Blindering:	Open / niet geblindeerd
Controle:	Actieve controle groep

Deelname

Nederland

Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-12-2006

Aantal proefpersonen:	500
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies

Datum:	18-09-2006
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL759
NTR-old	NTR770
Ander register	: N/A
ISRCTN	ISRCTN75875670

Resultaten

Samenvatting resultaten
Jongerden IP, Rovers MM, Grypdonck MH, Bonten MJ. Open and closed endotracheal suction systems in mechanically ventilated intensive care patients: a meta analysis. Crit Care Med, accepted.