Clinical trial results:
A COMPARISON OF DEXMEDETOMIDINE VS PLACEBO AFFECT ON SLEEP-QUALLITY IN MECHANICAL VENTILATED CRITICAL ILL PATIENTS

Summary

EudraCT number	2017-001612-11
Trial protocol	DK
Global end of trial date	23 June 2022

Results information

Result version number	v1 (current)
This version publication date	30 April 2023
First version publication date	30 April 2023

Trial information

Trial identification

Sponsor protocol code	3005032

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Rigshospital
Sponsor organisation address	Blegdamsvej 9, Copenhagen, Denmark, 2100
Public contact	Poul Jennum, Region Hovedstaden, +45 38632512, poul.jennum@regionh.dk
Scientific contact	Poul Jennum, Region Hovedstaden, +45 38632512, poul.jennum@regionh.dk

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	01 April 2022
Is this the analysis of the primary completion data?	Yes
Primary completion date	30 April 2020
Global end of trial reached?	Yes
Global end of trial date	23 June 2022
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

Does dexmedetomidine improve deep sleep/sleep quality compared to placebo.

Protection of trial subjects:

The study protocol was published by the British Medical Journal Open (BMJ Open)36 and was approved by the National Committee on Health Research Ethics (Approval number: S-20180214). Registration with EudraCT (European Union Drug Regulating Authorities Clinical Trials Database) registration number: 2017–001612-11DK (October 27, 2017. URL: https://www.clinicaltrialsregister.eu/ctrsearch/trial/2017-001612-11/DK) was performed, upon approval from the Danish Medicines Agency. Monitoring was performed by Good Clinical Practice (GCP). Registration with the Danish Data Protection Agency was done, and all data collected were stored online using REDCap, which complies with international confidentiality and GCP guidelines.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 November 2017
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	Yes

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Denmark: 30
Worldwide total number of subjects	30
EEA total number of subjects	30

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0

Adolescents (12-17 years)	0
Adults (18-64 years)	6
From 65 to 84 years	22
85 years and over	2

Subject disposition

Recruitment

Recruitment details:

All mechanically ventilated patient was screened from 8 a.m. to 4 p.m. every day during the study period and candidates fulfilling the inclusion and exclusion criteria were found using clinical observation and the hospital medical record. Patients that were eligible for inclusion were contacted by the investigator (MD) and informed written and

Pre-assignment

Screening details:

Inclusion criteria: admission to the ICU. 18 years old or over. Anticipated stay in the ICU for another day after the first sleep recording. Mechanically ventilated patients. Hemodynamically stable patients. Acceptable PSG recording during the first night. Conscious non-sedated patients with the Danish language.
Exclusion criteria: SOFA score

Period 1

Period 1 title	Baseline (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Data analyst, Carer, Assessor

Blinding implementation details:

Neither the electronic treatment code, randomization envelopes nor the study drug was accessible to the investigators, nor anyone employed in the ICU. No contact with the pharmacy personnel preparing the study drug was allowed at any time. Only the data manager and the GCP monitor had access to the randomization code. Sleep assessments were done randomly by an independent doctor having only the randomization code for identification, thus blinded to treatment and the order of the recordings

Arms

Are arms mutually exclusive?	Yes
Arm title	Dexmedetomidine

Arm description:

DEX

Arm type	Active comparator
Investigational medicinal product name	Dexmedetomidine
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Concentrate and solvent for suspension for injection
Routes of administration	Infusion

Dosage and administration details:

4 µg/mL iv. infusion

Arm title	placebo

Arm description:

placebo

Arm type	Placebo

Investigational medicinal product name	Glucose 5%in
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solvent for...
Routes of administration	Infusion

Dosage and administration details:

4 µg/mL infusion as with intervention drug

Number of subjects in period 1	Dexmedetomidine	placebo
Started	20	10
Completed	20	10

Baseline characteristics

End points

End points reporting groups

Reporting group title	Dexmedetomidine
Reporting group description: DEX	
Reporting group title	placebo
Reporting group description: placebo	
Subject analysis set title	Intervention
Subject analysis set type	Full analysis
Subject analysis set description: Dex treatedd	
Subject analysis set title	placebo treated
Subject analysis set type	Full analysis
Subject analysis set description: Placebo treated	

Primary: Sleep quantity

End point title	Sleep quantity[1]
End point description:	
End point type	Primary
End point timeframe: 3 days for each patient	

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: The data distribution has been tested for skewness, kurtosis, and standard deviation. T-test has been used in the case of normally distributed data and the Wilcoxon-rank-sum test, for non-parametric data. Linear regression has been used to determine correlations between the outcome and clinically relevant variables: days from admission (not equalized between groups), gender, age, BMI, APACHE-II (acute physiology and chronic health evaluation), SAPS3 (simplified acute physiologic score), S

End point values	Intervention	placebo treated		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed				
Units: 30	271	27		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information[1]	
Timeframe for reporting adverse events:	
From May 2018 to June 2020	
Adverse event reporting additional description:	
none	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	1

Frequency threshold for reporting non-serious adverse events: 1 %

Notes:

[1] - There are no non-serious adverse events recorded for these results. It is expected that there will be at least one non-serious adverse event reported.
Justification: There was no SAE

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

To facilitate sleep classification using the standard criteria is not optimal. These criteria have not been developed for critically ill patients who often present atypical sleep patterns in some studies called Watson to sleep or electroencephalog

Notes: