Ghrelin in coma

No registrations found.

Ethical review	Not applicable
Status	Pending
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON20553

Source
NTR

Brief title
GRECO

Health condition

Postanoxic encephalopathy, postanoxic, coma after cardiac arrest, ghrelin administration, neuroprotection

Sponsors and support

Primary sponsor: University of Twente
Clinical neurophysiology
Drienerlolaan 5
7522NB Enschede
Source(s) of monetary or material Support: ZonMW

Intervention

Outcome measures

Primary outcome

We aim to measure safety and efficacy of intravenous treatment with acyl-ghrelin to promote cerebral recovery in comatose patients after cardiac arrest. Safety will be monitored throughout hospitalization and during follow-up using all AEs reported, and by interim

analyses by an independent DSMB. Efficacy will be measured by the primary outcome measure, i.e. functional recovery as measured by the Cerebral Performance Category (CPC) scale at six months after cardiac arrest.

Secondary outcome

To estimate efficacy of ghrelin to modify:

1. Case fatality

2. Time to awaken (time interval between resuscitation and Glasgow Coma Scale (GCS) score of 14)

3. Long term outcome: CPC and cognitive functioning at 12 months

4. Cardiovascular measures:

• Mean arterial blood pressure day 1-7 (mean, highest, lowest)

• Heart rate day 1-7 (mean, highest, lowest)

• Arrhythmia day 1-7: yes / no. If yes: type of arrhythmia

• Cumulative dose of vasopressive medication day 1-7

• Cumulative dose of inotropic medication day 1-7

• Sequential Organ Failure Assessment score day 1-7

• Kidney function day expressed as GFR day 1-7

• CVVH day 1-7: yes / no

• Assist devices day 1-7: yes / no

5. Biomarkers

• Cardiac: troponine and CK / CK-MB ratio at day 0, 1, 2 or 3

• Neurological: NSE day 1, 2, 3

• Endocrinological: cortisol, growth hormone, prolactine, ACTH, IGF-1 day 1, 2, 3

6. Gastro-intestinal: gastric residual volume (day 1-7, during ICU admission)

Study description

Background summary

Rationale: Approximately half of all comatose patients after cardiac never regains consciousness because of severe postanoxic encephalopathy. The other half may be left with cognitive or motor disturbances. Currently, there is no treatment to promote cerebral recovery. Treatment with acyl-ghrelin improved functional recovery under experimental in vivo and in vitro conditions, and decreased histologically measured neuronal damage. Ghrelin has been tested in over one hundred human studies, including studies in healthy volunteers and patients with cardiopulmonary diseases, neuro-endocrine diseases, psychiatric diseases, and neurodegenerative diseases. Serious adverse events were extremely rare and difficult to attribute to ghrelin administration

Objective: First, we aim to estimate safety and efficacy of intravenous treatment with acyl-ghrelin to promote cerebral recovery in comatose patients after cardiac arrest. Second, we will estimate efficacy of ghrelin to modify case fatality, time to awaken, long term (cognitive) outcome, and cardiovascular outcomes, including blood pressure, treatment with inotropic medication, treatment with vasopression and cardiac biomarkers.

Study design: This will be a phase 2 multicenter, double blind, placebo controlled randomized clinical trial.

Study population: Comatose patients (GCS score of 8 or lower) after cardiac arrest and successful cardiopulmonary resuscitation, admitted to intensive care units of participating hospitals, will be included within 12 hours after resuscitation.

Intervention Intravenous treatment with acylated ghrelin 600micrg twice daily for 1 week vs. placebo.

Main study parameters/endpoints: The primary outcome measure will be functional outcome as expressed as the score of the cerebral performance category (CPC) at 6 months.

Study objective

Ghrelin administration in comatose patients after cardiac arrest is safe, causes no serious adverse events relatable to ghrelin use and it improves functional recovery in these patients.

Study design

Case fatality

Time to awaken

Cardiovasculair measures: day 0-7

Venous blood samples: day 0, 1, 2, 3

CPC scores: after 3 en 6 months

Neuropsychological examination: after 12 months

Gastric residual volume: day 0-7

Intervention

Intravenous treatment with acylated ghrelin 600micrg twice daily for 1 week vs. placebo.

Contacts

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Eligibility criteria

Inclusion criteria

In order to be eligible to participate in this study a subject must meet the following criteria:

- Age ≥18 years

- Out of hospital cardiac arrest

- Successful cardiopulmonary resuscitation

- Return of spontaneous circulation ¡Ü12 hours ago

- GCS score on admission ≤ 8 or suspected coma in patients who are sedated

- Admission to intensive care unit

- Hemodynamic and respiratory stability as determined by the treating intensive care physician, with the minimum requirement of mean arterial pressure > 65 mmHg. Treatment with inotropes, vasopressors or IABP is allowed.

Exclusion criteria

A potential subject who meets any of the following criteria will be excluded from participation in this study:

- Age <18 years

- A known progressive neurological disease

- Expected death within 48 hours

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Double blinded (masking used)
Control:	Placebo

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-10-2018
Enrollment:	160
Type:	Anticipated

Ethics review

Not applicable
Application type: Not applicable

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	NL7155
NTR-old	NTR7354
Other	ZonMW : 951 05001

Study results