

Using a neuroprotective drug to treat patients who have a serious type of brain bleeding caused by a rupture of a weakened blood vessel (aneurysm)

Submission date 28/06/2023	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 10/07/2023	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 07/07/2023	Condition category Circulatory System	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Aneurysmal subarachnoid hemorrhage (aSAH) is a very dangerous condition that can be life-threatening, even with prompt and intensive treatment. Around 15% of patients don't survive long enough to reach the hospital, and about 30% still die despite receiving the right treatment. For patients who have a more severe initial condition (measured using the Hunt Hess scale), this percentage can rise to 80%. Using neuroprotective drugs as an additional form of treatment has shown potential for improving the outcome in these cases.

Who can participate?

Adult patients with aneurysmal SAH and Hunt Hess grade 3 or more.

What does the study involve?

In addition to the standard treatment and monitoring, the study includes the use of a neuroprotective drug called Cerebrolysin as an additional therapy. The dosage prescribed is 30 ml per day for a duration of 10 days.

What are the possible benefits and risks of participating?

The potential benefit of this therapy is its neuroprotective effect, which can help reduce neuroinflammation and decrease the presence of harmful free radicals in the brain. The desired outcome is an improvement in functional recovery that exceeds expectations for this group of high-risk patients. As of now, there are no known risks associated with this therapy.

Where is the study run from?

University Hospital Zagreb, Department of Neurology (Croatia)

When is the study starting and how long is it expected to run for?

March 2021 to January 2025

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Prof Dr Zdravka Poljakovic, zdravka.po@gmail.com

Contact information

Type(s)

Principal Investigator

Contact name

Prof Zdravka Poljakovic

ORCID ID

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Contact details

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Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

Nil known

Study information

Scientific Title

Cerebrolysin as add-on therapy in patients with high Hunt-Hess grade subarachnoidal hemorrhage

Acronym

CERESAH

Study objectives

Hypothesis:

Cerebrolysin as an add-on drug improves the 90-day functional outcome in patients with subarachnoidal haemorrhage and initial Hunt-Hess grade III and higher.

Aim of the study:

To investigate the efficacy and safety of Cerebrolysin as an add-on therapy in patients with HH grade III and higher.

Ethics approval required

Ethics approval required

Ethics approval(s)

Approved 14/06/2021, Ethics committee of University Hospital Zagreb (Kispaticeva 12, Zagreb, 10000, Croatia; +385-1-2388888; kbc-zagreb@kbc-zagreb.hr), ref: 8.1.-21/142-1

Study design

Single center observational longitudinal case-control study during a 90 day follow-up period

Primary study design

Observational

Secondary study design

Case-control study

Study setting(s)

Hospital

Study type(s)

Treatment

Participant information sheet

See additional files (in Croatian)

Health condition(s) or problem(s) studied

Neuroprotection in patients with severe aneurysmal subarachnoidal haemorrhage after endovascular treatment of ruptured aneurysm

Interventions

Patients with aneurysmal SAH and initial Hunt-Hess grade of 3 and more and secured aneurysm by endovascular approach will be included in the study and routinely treated during hospital stay. All patients will receive approved neuroprotective agent, Cerebrolysine (30 ml/day during 10 days) together with routine care. The diagnostic follow-up will be performed according to the routine protocol, and will include standard hemodynamic monitoring, TCD monitoring, ICP monitoring if required, EVD if required, intraventricular thrombolysis if required and routine neuroimaging. Patients will be then evaluated for their functional status 90 days after the bleeding. Functional outcome will be compared with literature data for the same group of patients with severe subarachnoidal bleeding.

Intervention Type

Drug

Pharmaceutical study type(s)

Not Applicable

Phase

Phase IV

Drug/device/biological/vaccine name(s)

Cerebrolysine

Primary outcome measure

Functional outcome of the patients measured with mRS 90 days after the bleeding

Secondary outcome measures

1. Development of delayed neurological deficit during 21 days after the bleeding, verified by neuroimaging
2. Developement of the vasospasms during 14 days after the bleeding during TCD monitoring
3. Mortality after 90 days measured using patient records
4. Safety of Cerebrolysine (adverse events) up to end of study

Overall study start date

01/03/2021

Completion date

01/01/2025

Eligibility

Key inclusion criteria

1. Aneurysmal subarachnoidal haemorrhage
2. Inital Hunt-Hess grade 3 or higher
3. Endovascularly secured aneurysm
4. Availability to add-on treatment not more than 24 hours after embolisation

Participant type(s)

Patient

Age group

Adult

Lower age limit

18 Years

Upper age limit

70 Years

Sex

Both

Target number of participants

50

Key exclusion criteria

1. Known allergy to Cerebrolysine
2. Refusal of participation in the study

Date of first enrolment

01/09/2021

Date of final enrolment

01/01/2024

Locations**Countries of recruitment**

Croatia

Study participating centre

University Hospital Zagreb, Department of Neurology

Kispaticeva 12

Zagreb

Croatia

10000

Sponsor information**Organisation**

University Hospital Centre Zagreb

Sponsor details

Kispaticeva 12

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kbc-zagreb@kbc-zagreb.hr

Sponsor type

Hospital/treatment centre

Website

http://www.kbc-zagreb.hr/university_hospital_centre_zagreb_croatia

ROR

<https://ror.org/00r9vb833>

Funder(s)

Funder type

Other

Funder Name

Investigator initiated and funded

Results and Publications

Publication and dissemination plan

Planned publication in a high-impact peer reviewed journal.
Reports of preliminary results on international stroke congresses.

Intention to publish date

01/01/2026

Individual participant data (IPD) sharing plan

The datasets generated and analysed during the current study will be available upon request form to Zdravka Poljakovic, zdravka.po@gmail.com

The data which can be available are:

demographic data (blinded)

clinical data about the initial HH grade

clinical data about the aSAH treatment

Neuroimaging

TCD monitoring

safety data

early mRS -by discharge from the hospital

final mRS - 90 days after the initial bleeding

mortality data

relevant diagnostic work-up data if applicable (ICP, TCD, EVD; ivthrombolysis, etc)

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	in Croatian		07/07/2023	No	Yes
Protocol file			07/07/2023	No	No