

# INPLASY

## Percheron Artery Stroke: association between reperfusion therapies and prognosis

INPLASY202410059

doi: 10.37766/inplasy2024.1.0059

Received: 14 January 2024

Published: 14 January 2024

Papiri, G<sup>1</sup>.

### Corresponding author:

Giulio Papiri

giulio.papiri@outlook.it

### Author Affiliation:

Ospedale Provinciale "Madonna del Soccorso" San Benedetto del Tronto.

### ADMINISTRATIVE INFORMATION

**Support** - None.

**Review Stage at time of this submission** - Data analysis.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202410059

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 14 January 2024 and was last updated on 14 January 2024.

### INTRODUCTION

**Review question / Objective** To evaluate the association of acute phase treatments with prognosis in Percheron artery stroke, a rare subtype of posterior circulation acute ischemic stroke.

**Rationale** Acute ischemic stroke treatment has been drastically changed after introduction of reperfusion therapies, such as alteplase or mechanical thrombectomy. Rarer syndromes, such as Percheron artery stroke, have been on the whole excluded by large clinical trials, therefore current evidence relies on small observational studies. It could be therefore useful to assess in this case whether acute phase treatments are associated to better outcomes, in analogy to more common syndromes.

**Condition being studied** Percheron Artery Stroke.

### METHODS

**Search strategy** PubMed, Scopus and Embase via Ovid. Searches were run from inception to 20th August 2023.

Search Strings

PubMed - run 20/8/2023

(Percheron OR Percheron Artery Stroke OR Percheron Artery Infarction)

Scopus - run 20/8/2023

(Percheron OR Percheron Artery Stroke OR Percheron Artery Infarction)

Embase via Ovid - run 20/8/2023

(Percheron OR Percheron Artery Stroke OR Percheron Artery Infarction).

**Participant or population** Patients aged 16 or more.

**Intervention** I.V. Alteplase, Primary Mechanical Thrombectomy, Combined Treatment.

---

**Comparator** Antiplatelet and Anticoagulant therapies.

**Study designs to be included** No restrictions.

**Eligibility criteria** Neuroimaging (Computed Tomography/Magnetic Resonance Imaging) or autopsy-proven paramedian bithalamic strokes. Exclusion criteria: absence of information about the reperfusion or antithrombotic therapy regimen adopted, absence of prognostic information regarding either discharge or follow-up, or whereas stroke was deemed as caused by arteriovenous anomalies of the posterior circulation as well as by other pre-existing life-threatening conditions (major trauma, septic shock, cardiac arrest).

**Information sources** Electronic Databases (PubMed, Scopus, EMBASE via Ovid).

**Main outcome(s)** Primary outcome: Odds Ratio/Risk Ratio of Disability after stroke measured via dichotomized modified Rankin Scale score (Good Outcome: mRS from 0 to 2; Bad Outcome: mRS 3 to 6).

**Additional outcome(s)** Secondary outcomes: Mortality rate after stroke; Risk of intracranial haemorrhage.

**Quality assessment / Risk of bias analysis** Pierson Case Report Quality Scale.

**Strategy of data synthesis** Multivariate Logistic regression adopting the outcome of interest as dependent variable.

Age, Gender, Involvement of extrathalamic Structures, Glasgow Coma Scale on Admission, Treatment type were used as predictive variables. Treatment effect was calculated using odds ratios and risk ratios. The unit of analysis were individual patients.

**Subgroup analysis** None.

**Sensitivity analysis** None.

**Language restriction** English, German, French, Spanish, Italian, Chinese and Japanese.

**Country(ies) involved** Italy.

**Keywords** Percheron Artery Stroke.

**Contributions of each author**

Author 1 - Giulio Papiri.

Email: giulio.papiri@outlook.it