

Antithrombotic Treatment After Stroke Because Of Intracerebral Hemorrhage

Luke A. Perry, BSc*; Eivind Berge, PhD*; Joshua Bowditch, BSc(Hons); Elisabeth Forfang, MD; Ole Morten Rønning, PhD; Graeme J. Hankey, MD; Elmer Villanueva, MD; Rustam Al-Shahi Salman, PhD

Many survivors of stroke because of intracerebral hemorrhage (ICH) are at risk of ischemic vascular disease. Antithrombotic (antiplatelet or anticoagulant) treatments may lower the risk of ischemic events after ICH, but they may increase the risks of bleeding.

Objective

To determine the overall effectiveness and safety of antithrombotic drugs for secondary prevention after ICH.¹

Methods

Search Methods

We searched the Cochrane Stroke Group Trials Register (March 24, 2017), the CENTRAL (Cochrane Central Register of Controlled Trials: the Cochrane Library 2017, Issue 3), Ovid Medline (from 1948 to March 2017), Ovid Embase (from 1980 to March 2017), and online registries of clinical trials (March 8, 2017). We also screened the reference lists of included trials for additional, potentially relevant studies.

Selection Criteria

We selected all randomized controlled trials (RCTs) of any antithrombotic treatment versus no antithrombotic treatment for short- or long-term secondary prevention of ischemic events after ICH.

Data Collection and Analysis

Three review authors independently extracted data and assessed the included RCTs for risk of bias. We calculated the risk ratio (RR) or odds ratio, as appropriate, and used fixed-effect modeling for meta-analyses.

Main Results

We included 2 RCTs with a total of 121 participants. Both RCTs were of short-term parenteral anticoagulation early after ICH: one tested heparin and the other enoxaparin. The risk of bias in the included RCTs was generally unclear or low. The included RCTs did not report our chosen primary outcome (a composite of all serious vascular events including ischemic stroke, myocardial infarction, other major ischemic event, ICH, major extracerebral hemorrhage, and vascular death). Parenteral anticoagulation did not significantly affect case fatality (RR, 1.25;

95% confidence interval, 0.38–4.07 in one of the trials involving 46 participants), ICH, or major extracerebral hemorrhage (no detected events in of the trials involving 75 participants), growth of ICH (RR, 1.64; 95% confidence interval, 0.51–5.29 in both trials involving 121 participants), deep vein thrombosis (RR, 0.99; 95% confidence interval, 0.49–1.96 in both trials involving 121 participants), or major ischemic events (RR, 0.54; 95% confidence interval, 0.23–1.28 in both trials involving 121 participants). The literature search identified 6 trials that are ongoing or ready to start recruitment (see full review).

Conclusions

There is insufficient evidence from RCTs to support or discourage the use of antithrombotic treatment after ICH. RCTs comparing starting versus avoiding antiplatelet or anticoagulant drugs after ICH appear justified and are needed in clinical practice.

Acknowledgments

This article is based on a Cochrane Review published in The Cochrane Library 2017, Issue 5 (see www.thecochranelibrary.com for information). Cochrane Reviews are regularly updated as new evidence emerges and in response to feedback, and The Cochrane Library should be consulted for the most recent version of the review. URL: <http://dx.doi.org/10.1002/14651858.CD012144>.

Disclosures

Eivind Berge is a coordinating investigator of the planned STATICH trial (Study of Antithrombotic Treatment After Intracerebral Haemorrhage). Elisabeth Forfang is a managing investigator of the planned STATICH trial. Rustam Al-Shahi Salman is a chief investigator of the UK REstart or STop Antithrombotics Randomised Trial (RESTART; www.RESTARTtrial.org, ISRCTN71907627). The other authors report no conflicts.

Reference

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From the School of Medicine, Monash University, Melbourne, VIC, Australia (L.A.P., J.B.); Department of Internal Medicine, Oslo University Hospital, Norway (E.B., E.F.); Department of Neurology, Akershus University Hospital, Lørenskog, Norway (O.M.R.); School of Medicine, Sir Charles Gairdner Hospital Unit, The University of Western Australia, Perth, Australia (G.J.H.); Department of Public Health, Xi'an Jiaotong-Liverpool University, Suzhou, China (E.V.); and Centre for Clinical Brain Sciences, University of Edinburgh, United Kingdom (R.A.-S.S.).

*L. Perry and Dr aBerge are joint lead authors.

Correspondence to Luke A. Perry, BSc, Monash University, Melbourne, VIC 3800, Australia. E-mail lukeaperry@gmail.com

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