REstart or STop Antithrombotics Randomised Trial (RESTART)

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www.RESTARTtrial.org

Research question

For adults surviving spontaneous (non-traumatic) intracerebral haemorrhage (ICH) who had taken an antithrombotic (i.e. anticoagulant or antiplatelet) drug for the prevention of vaso-occlusive disease before the ICH, does a policy of starting antiplatelet therapy result in a beneficial net reduction of all serious vascular events over two years compared with a policy of avoiding antiplatelet therapy?

Design

Investigator-led, multicentre, parallel group, prospective randomised open blinded end-point clinical trial.

Eligibility criteria

Adults with spontaneous primary or secondary ICH who had taken antithrombotic drugs for the prevention of vaso-occlusive disease before ICH onset. Brain magnetic resonance imaging (MRI) performed after ICH but before randomisation (if in MRI sub-study).

Randomisation

Central, web-based randomisation system using a minimisation algorithm, with 1:1 treatment allocation to which central research staff are masked.

Interventions

Start vs. avoid antiplatelet drugs (drugs chosen at investigator's discretion).

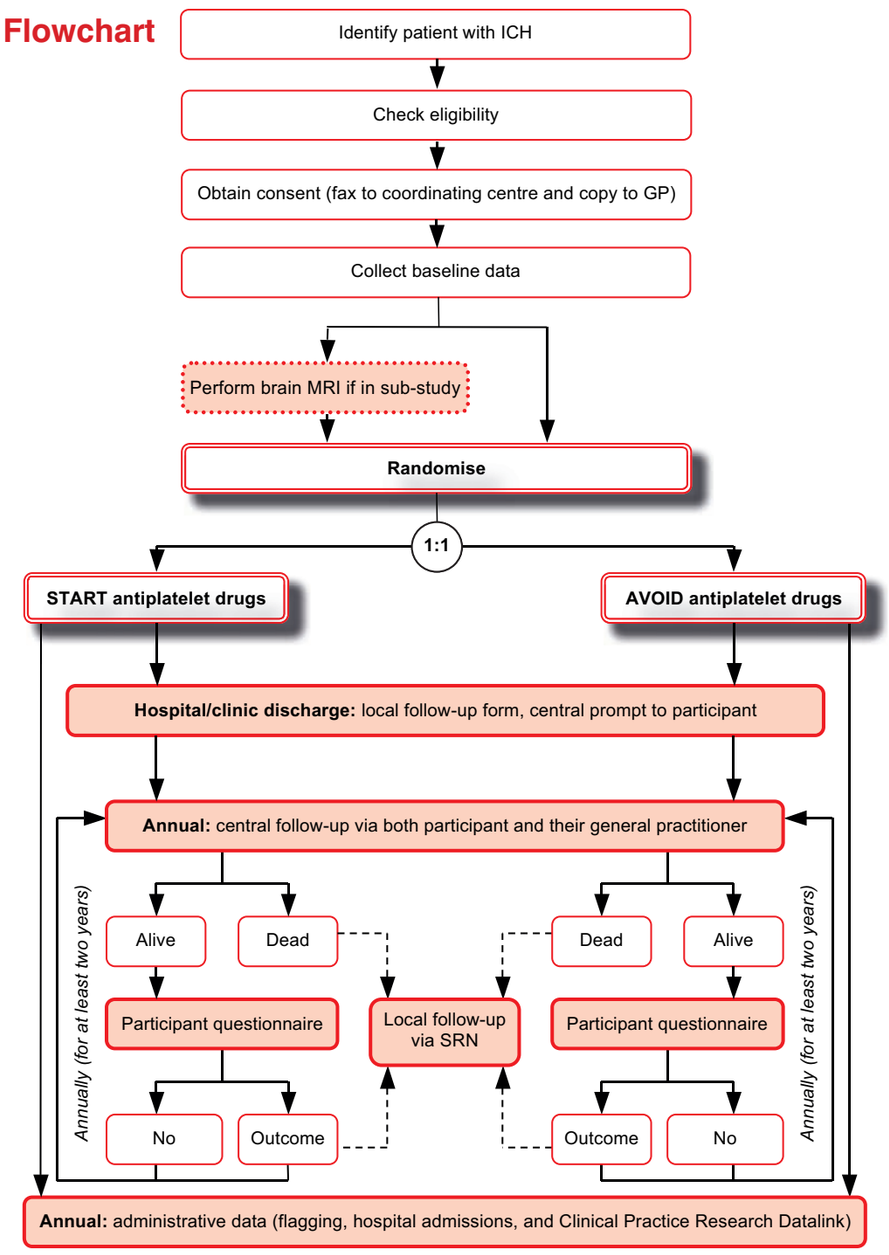
Primary outcome measure

Recurrent symptomatic ICH.

Secondary outcome measures

Possible recurrent ICH; symptomatic non-fatal extracerebral haemorrhage, extracranial haemorrhage, and vaso-occlusive events; death; modified Rankin Scale score; adherence to antiplatelet drugs.

Trial Flowchart



GP = general (family) practitioner. SRN = UK stroke research network.

Power

- Given that the annual recurrence rate of ICH may be 1.8-7.4% and there may be a 1-4-fold relative increase in this risk on antiplatelet therapy, a trial with 720 participants will have 90% power to detect a doubling of an annual ICH rate of 4.5% or 93% power to detect a quadrupling of an annual rate of 1% over two years at the 5% level.

- This trial will also provide adequately precise estimates of the rates of all serious vascular events to inform the design of a trial with the power to assess net clinical benefit.

- We will look for an interaction between the presence of strictly lobar microbleeds (as a biomarker of cerebral amyloid angiopathy) and the effect of antiplatelet drugs on the risk of recurrent ICH.

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