A Systematic Review of Immediate Anticoagulation for Ischemic Stroke of Presumed Cardioembolic Origin

To the Editor:

In the meta-analysis of randomized controlled trials on the efficacy and safety of anticoagulant treatment in acute cardioembolic stroke,1 the timing of anticoagulation in these patients is still a controversial issue. Thus a critical review of all published literature is essential to generate consensus and also as a starting point for further research.

We also performed, presented (ENS Meeting 2006) and published as an abstract2 a systematic review and meta-analysis on this subject that was not mentioned in Paciaroni’s et al review, probably because when our review was presented, his paper was already submitted. Our results also did not support the routine use of anticoagulants in the first 48 hours of an ischemic stroke of presumed cardioembolic origin.

We now update the review including 8 studies: CESG,3 IST,4 Fiss bis,5 TOAST,6 HAEST,7 TAIST,8 Camerlingo et al9 and ARGIS-1 (LaMonte, unpublished data, 2006). The ARGIS-1 study was not included in Paciaroni’s et al review.

Results reveal a significant increase in symptomatic and asymptomatic hemorrhages when comparing anticoagulation with no anticoagulation or aspirin (Figure 1), but favor treatment with anticoagulants for the prevention of recurrent ischemic stroke or stroke of unknown cause (Figure 2).

As we included ARGIS-1 in the review, we could additionally conclude for the lack of evidence in favor of anticoagulants relatively to a favorable outcome at 3 months (Figure 3).

The review of the methodology of individual studies disclosed several important bias and quality limitations. Only one trial5 was specifically designed for cardioembolic strokes. This trial supported acute anticoagulation in nonhypertensive patients, but it was prematurely terminated. All other trials excluded patients with clear indications for anticoagulation. CT scan before treatment was not required for patient inclusion in IST. Low weight was temporarily an exclusion factor in TOAST trial. Advanced age and stroke severity were also exclusion factors in several trials.

Taking into account these methodological limitations, we think that a new pragmatic randomized clinical trial is needed.

Disclosures

None.


Figure 1. Comparison between anticoagulation and no anticoagulation for the presence of symptomatic and asymptomatic cerebral hemorrhages.
Figure 2. Comparison between anticoagulation and no anticoagulation for the recurrence of stroke (ischemic or unknown cause).

Figure 3. Comparison between anticoagulation and no anticoagulation for the presence of favorable outcome at 3 months.
A Systematic Review of Immediate Anticoagulation for Ischemic Stroke of Presumed Cardioembolic Origin
Leonor C. Guedes and José M. Ferro

Stroke. 2008;39:e81-e82; originally published online March 27, 2008;
doi: 10.1161/STROKEAHA.107.513200

Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2008 American Heart Association, Inc. All rights reserved.
Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://stroke.ahajournals.org/content/39/5/e81

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Stroke can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Stroke is online at:
http://stroke.ahajournals.org//subscriptions/