A Risk Score to Predict Future Atrial Fibrillation Derived From Patients With Stroke Initially Presenting With Atrial Fibrillation?

To the Editor:

We read with great interest the article by Suissa et al describing a score named Score for the Targeting of Atrial Fibrillation (STAF) derived by multivariate logistic regression analysis to predict the occurrence of atrial fibrillation up to 3 months after an ischemic stroke in an unselected patient cohort from a tertiary care hospital.

Estimating the likelihood of atrial fibrillation as a cause of ischemic stroke would be greatly useful for guiding the diagnostic workup and secondary preventive strategies. However, we understand from the article that the model was generated from all the patients with documented atrial fibrillation. If so, we would like to point out that 70% of these patients were already presenting with atrial fibrillation on the initial electrocardiogram.

Predicting the likelihood of atrial fibrillation in these patients is hardly an issue, because electrocardiogram on admission is readily available.

It would be of great interest to assess the power of the proposed risk score in the subpopulation of patients with ischemic stroke but without a definitive diagnosis of atrial fibrillation at presentation. This is not a trivial point because risk markers might be quite different in these patients, for example, left atrial dilation would be expected to be less common among paroxysmal (potentially presenting in sinus rhythm) as compared with longstanding permanent (presenting with atrial fibrillation on initial electrocardiogram) atrial fibrillation.

A score with a high negative predictive value for ruling out paroxysmal atrial fibrillation in such a population would be most welcome, because prolonged electrocardiographic monitoring can be inconvenient for patients with a recent stroke, leading to moderate compliance, and would also increase the use of resources. On the other hand, prolonged electrocardiographic monitoring has been reported to improve the detection rate of atrial fibrillation, thus frequently leading to a change in therapy, namely anticoagulation. Selectively applying extended monitoring to those patients at highest risk of developing atrial fibrillation could therefore be medically more appropriate whereas at the same time improve the cost–benefit ratio of the procedure.

However, patient numbers in the STAF cohort may be too small (only 36 of 370 patients presenting in sinus rhythm had newly diagnosed atrial fibrillation after admission) to derive such a score. We therefore fully support the notion that validation of STAF in a larger multicenter cohort would be much appreciated. Such an analysis certainly necessitates an adequate estimation of patient numbers to allow for the analysis of STAF in the important subgroup of patients with ischemic stroke but without atrial fibrillation at presentation. Also, prolonged Holter or event monitoring may be considered, because it will identify cases of atrial fibrillation that would otherwise be missed.

Disclosures

None.

Raoul Stahrenberg, MD
Rolf Wachter, MD
Department of Cardiology and Pneumology
University of Göttingen
Göttingen, Germany

Klaus Gröschel, MD
Department of Neurology
University of Göttingen
Göttingen, Germany


A Risk Score to Predict Future Atrial Fibrillation Derived From Patients With Stroke Initially Presenting With Atrial Fibrillation?
Raoul Stahrenberg, Rolf Wachter and Klaus Gröschel

Stroke. 2010;41:e169; originally published online February 4, 2010;
doi: 10.1161/STROKEAHA.109.573675

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/41/3/e169

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/