Hemorrhagic Stroke in the SPARCL Study

To the Editor:

Goldstein et al reported a post hoc analysis of data from the Stroke Prevention with Aggressive Reductions in Cholesterol Levels (SPARCL) trial in order to determine the effects of high-dose atorvastatin in the secondary prevention of cerebrovascular events in men and women. However, they did not mention how statin therapy increased the risk of hemorrhagic stroke in men and women.

In fact, in the SPARCL trial as compared with placebo, the use of high-dose atorvastatin (in relatively young and accurately selected patients who had a stroke or transient ischemic attack) was associated with a 66% increase in the relative risk of hemorrhagic stroke among the patients receiving the statin drug. In clinical practice where atorvastatin might be given to older and unselected patients, this detrimental action might raise concerns both in women and men.

Indeed, in addition to treatment with atorvastatin, an exploratory analysis of the SPARCL trial found that having hemorrhagic stroke as an entry event, male sex, and advancing age at baseline accounted for the great majority of the increased risk of hemorrhagic strokes. However, a sensitivity analysis excluding all patients with a hemorrhagic stroke as an entry event in the SPARCL trial found that statin treatment was still associated with an increased risk of hemorrhagic stroke. Furthermore, in a subgroup of patients with a history of cerebrovascular disease enrolled in the Heart Protection Study which did not include patients with hemorrhagic stroke, a similar increased risk of hemorrhagic stroke during follow-up was demonstrated.

Of note, lower low-density lipoprotein cholesterol levels, with or without statin treatment, have also been shown to be strongly and independently related to a higher risk of symptomatic hemorrhagic transformation after ischemic stroke thrombolysis. Because only patients with nonfatal recurrence of stroke need recanalization, the higher risk of hemorrhagic transformation after recanalization therapy might be particularly detrimental in women, given that in the SPARCL trial nonfatal stroke was reduced in women by a nonsignificant 0.7%.

Therefore, we feel that in clinical practice there are still many concerns about efficacy and safety of high-dose statins in the secondary prevention of stroke.

Disclosures

None.

Luca Mascitelli, MD
Medical Service
Comando Brigata alpina “Julia”
Udine, Italy

Francesca Pezzetta, MD
Cardiology Service
Ospedale di Tolmezzo
Tolmezzo, Italy

Mark R. Goldstein, MD, FACP
Fountain Medical Court
Bonita Springs, Fla


Hemorrhagic Stroke in the SPARCL Study
Luca Mascitelli, Francesca Pezzetta and Mark R. Goldstein

Stroke. 2008;39:e180; originally published online October 2, 2008;
doi: 10.1161/STROKEAHA.108.532309
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/39/11/e180

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/