To the Editor:

We read with great interest the review of Bushnell et al. Since 2001 we encountered 4 women who experienced cerebral infarction during long-term hormone replacement therapy (HRT). We pointed out in our articles that their cerebral infarcts were attributable to HRT-mediated changes in the coagulation system. The review of Bushnell et al described that the precise mechanism of an estrogen-associated increase in risk for venous (as well as arterial) thrombotic events remains unknown despite accumulated evidences of hemostatic biomarkers change in a prothrombotic direction. In our patients we observed depressed levels of protein C and S activity. Protein S activity returned to the normal range after cessation of HRT. The HRT-induced procoagulant state might be attributable to an interaction among subtle changes in the coagulation system. Based on our published findings, we strongly suggest that the level of protein C and S activity be monitored in women on long-term HRT to prevent the occurrence of stroke.

Disclosures

None.

Nobuhiko Inoue, MD, PhD
Department of Neurosurgery
Kumamoto Neursurgical Hospital
Kumamoto, Japan

Akihito Hashiguchi, MD, PhD
Division of Neurosurgery
Shinbeppu Hospital
Oito, Japan

Susumu Yoshioka, MD
Department of Neurosurgery
Oita Prefectural Hospital
Oita, Japan

Satoshi Goto, MD, PhD
Department of Clinical Neuroscience
Institute of Health Biosciences
Tokushima University Graduate School of Medical Sciences
Tokushima, Japan

Yukitaka Ushio, MD, PhD
Director
Otemae Hospital
Osaka, Japan


Stroke in Women During Long-Term Hormone Replacement Therapy Influencing Coagulation Systems

Nobuhiro Inoue, Akihito Hashiguchi, Homare Ichimura, Susumu Yoshioka, Satoshi Goto and Yukitaka Ushio

*Stroke*. 2007;38:e10; originally published online March 15, 2007; doi: 10.1161/STROKEAHA.106.474635

*Stroke* is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2007 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/38/5/e10

An erratum has been published regarding this article. Please see the attached page for:
http://stroke.ahajournals.org/content/38/6/e36.full.pdf

**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/
In the article entitled “Stroke in Women During Long-Term Hormone Replacement Therapy Influencing Coagulation Systems” by Inoue et al., one of the authors, Yukitake Ushio, is incorrectly spelled. The correct spelling is Yukitaka Ushio. The publisher regrets this error.

The corrected version can now be viewed online at http://stroke.ahajournals.org.