Cerebral White Matter Lesions, Retinopathy, and Stroke

To the Editor:

I read with interest the study by Vermeer and colleagues1 on the risk of stroke associated with MRI-defined white matter lesions (WML) in the Rotterdam Scan Study. As cerebral MRI becomes a routine diagnostic test for widening indications of neurological disorders, this study provides further data on the clinical significance of these lesions in asymptomatic elderly people. I draw the attention of the authors to a recent analysis from the Atherosclerosis Risk in Communities (ARIC) Study.2 In the ARIC Study, middle-aged people with subclinical cerebral WML detected on MRI were also more likely to have an incident stroke over a 5-year period (multivariable-adjusted relative risk, 3.4; 95% confidence interval, 1.5 to 7.7) than persons without WML. The magnitude of the relative risk appears to be within the range reported in the Rotterdam Study.

In addition, persons with both WML and signs of retinopathy (eg, microaneurysms, retinal hemorrhages) detected from photographs had a much higher incidence of stroke (multivariable-adjusted relative risk, 18.1; 95% confidence interval, 5.9 to 55.4) than those without either cerebral or retinal lesions, independent of stroke risk factors. We hypothesized that subclinical cerebral microvascular pathology is more extensive when WML and retinopathy are simultaneously present. Alternatively, WML may reflect heterogeneous entities, and the presence or absence of retinopathy may help distinguish WML that are more “pathological” (with higher risk of stroke) from those more “benign” in nature. I believe that the participants of the Rotterdam Study had retinal photographs that were graded for retinopathy lesions.3 I would encourage the authors to explore similar analyses to confirm the ARIC findings.

Tien Yin Wong, MBBS, FRCSE, MPH, PhD
Department of Ophthalmology
Centre for Eye Research Australia
University of Melbourne,
Melbourne, Australia

Cerebral White Matter Lesions, Retinopathy, and Stroke
Tien Yin Wong

Stroke. 2003;34:e212; originally published online October 16, 2003;
doi: 10.1161/01.STR.0000099073.76366.73
Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2003 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/34/11/e212

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/