

# Combination Score Flags Stroke Risk After TIA

BY PATRICE WENDLING  
Chicago Bureau

CHICAGO — A low ABCD<sup>2</sup> score identified transient-ischemic-attack patients at low risk for having an early disabling stroke, but it was suboptimal at identifying more minor strokes in a prospective, multicenter study of 1,667 patients.

Early diffusion-weighted MRI (DW-MRI) scanning was shown to add pre-

dictive value beyond that of the ABCD<sup>2</sup> (Age, Blood Pressure, Clinical Features, Duration, Diabetes) score in identifying patients at low risk for an ischemic stroke within 90 days.

The negative predictive value of a low-risk score for predicting a stroke-free interval 7 days after a transient ischemic attack (TIA) was 86% for all strokes, compared with 99% for disabling strokes.

A total of 210 patients stratified as low

risk according to an ABCD<sup>2</sup> score of 3 or less underwent a DWMRI scan within 24 hours of TIA symptom onset. None of the 178 patients with a negative scan had a disabling stroke within 90 days (sensitivity 100%), Dr. Andrew W. Asimos and his associates reported in a poster presentation at the annual meeting of the American College of Emergency Physicians.

A medical record review revealed that

a definitive stroke occurred within 90 days in 388 patients (23%), while a probable stroke occurred in an additional 10 patients. Of all strokes that occurred within 90 days, 19% were disabling.

“These results suggest that the ABCD<sup>2</sup> score combined with early DWMRI scanning provides the best predictive value in identifying TIA in patients at low risk for an ischemic stroke,” said Dr. Asimos of Carolinas Medical Center, Charlotte, N.C.

The ABCD<sup>2</sup> score, originally described in 2007 (Lancet 2007;369:283-92), has emerged as the preferred way to stratify TIA patients for early stroke risk.

Dr. Michelle Biros, professor of emergency medicine at the University of Minnesota, Minneapolis, said during a discussion that it was “somewhat concerning” that 3% of patients with a disabling stroke and 15% with a nondisabling stroke were stratified by an ABCD<sup>2</sup> score as having low risk.

“This provides us with a measure of caution for using a scale that’s easy to clinically apply,” she said. “Beyond the fact that the imaging is expensive and maybe doesn’t add too much, the score isn’t as useful as we had hoped.”

Limitations of the study were that not all patients received MRI imaging, patient follow-up was based on a medical record review, and missing data precluded calculation of a stratified ABCD<sup>2</sup> score in 343 patients, Dr. Biros said.

Dr. Asimos said the study is the first multicenter attempt to validate the ABCD<sup>2</sup> score outside of the population from which it was derived.

“If you only look at disabling stroke as an outcome measurement, a low-risk ABCD<sup>2</sup> score does a pretty good job at predicting a low likelihood of disabling stroke within 90 days,” he said. “If patients are stratified as moderate to high risk based on an ABCD<sup>2</sup> score, doing an early DWMRI will provide supplemental predictive value in identifying those patients who are truly at low risk for a disabling or nondisabling stroke.”

DWMRI imaging of the brain is highly sensitive for identifying infarction, but is also costly and time consuming, Dr. Asimos said in an interview.

The study was conducted at 16 North Carolina hospitals and enrolled patients with no prior stroke history and a presumptive admission diagnosis of TIA who presented within 24 hours of symptom onset. A total of 343 patients with missing data were excluded from the analysis.

A definitive stroke included infarction present on brain imaging, while a probable stroke was identified as a stroke diagnosis in the medical records without infarction on brain imaging. Strokes were classified as disabling or nondisabling based on a modified Rankin Scale Score dichotomized at less than 3 derived from the medical record review.

The investigators disclosed that the study was supported by the Emergency Medicine Foundation, the Foundation for Education in Neurological Emergencies, and Boehringer Ingelheim Pharmaceuticals. ■



**Effient**<sup>TM</sup>  
*(prasugrel) tablets*

**COMING SOON!**

