

Stroke Prevention

Stroke QUERI

April 2012

Transient Ischemic Attack (TIA): Warning of Future Atherosclerotic Events

Approximately 2,500 Veterans present with a transient ischemic attack (TIA) to a VA Emergency Department (ED) each year. A TIA has the same symptoms and is caused by the same mechanisms as a stroke. The sole difference is that in a TIA, the symptoms spontaneously resolve (typically within one hour), whereas they do not usually resolve entirely in a stroke. Although a TIA does not cause permanent damage, it is a warning that an atherosclerotic event may be imminent. Persons who have had a TIA will have a 10-15% risk of stroke in the next 90 days, about twice as high as persons with a recent stroke. Overall, approximately 25% of TIA patients will have a recurrent vascular event or death in the first 90 days after the TIA. In summary, this group has one of the highest short-term risks of vascular events, so patients with TIA should undergo a diagnostic workup for risk factors, and then receive prevention therapies as quickly as possible.

TIA is the cerebral equivalent of angina. Just as there is wide variability in the management of angina (some patients are admitted to the hospital, others are managed in observation units in the

ED), similarly, we expect to observe variations in TIA management. Yet, few studies within or outside VA have described the state of management of TIA. Stroke-QUERI investigators recently analyzed how TIA is managed across the VA healthcare system and the relationship between different management approaches and one-year outcomes.

Study Design

The study design was a retrospective cohort of Veterans who presented to an urgent care (UC) or ED with a diagnosis of TIA at any VA facility in fiscal year 2008. Stroke-QUERI sought to address three research questions:

1. Among Veterans with TIA who present to a VA UC or ED, what proportion is admitted versus sent home?
2. Do Veterans with TIA who present to VA urgent care or ED receive a rapid diagnostic workup?
3. Are there differences in one-year outcomes between Veterans who are admitted versus not admitted?

The study cohort consisted of 2,464 Veterans with a TIA. Roughly one-third (846) was admitted and two-thirds (1,618) were not. Predictors of admission were risk factors for stroke: older age, history of hypertension,

atrial fibrillation, or diabetes. Veterans who were admitted were more likely to receive neuroimaging of the brain, carotid imaging, and echocardiograms, although substantial room for improvement was observed in both groups. Despite these differences in diagnostic work-up, findings did not show significant differences in one-year risk of stroke or a composite measure of stroke, MI, and death.

To Admit or Not to Admit?

In the stroke field, there is a vigorous debate on the necessity of admitting all patients with TIA, but the data supporting either side are sparse. Stroke-QUERI has shown that Veterans who are not admitted have similar outcomes as those that are admitted. The reason for this could be the integrated care delivery model of VA; Veterans can be rapidly referred to providers who can access the same electronic medical record. Further planned work includes identifying the subset of patients who should be admitted, and determining whether there are organizational characteristics at the facility level that are associated with admission. Finally, Stroke-QUERI plans to test interventions for improving the care delivery of all patients with TIA – admitted or not – to reduce the risk of stroke in this high-risk group.

Continued

How Do I Learn More?

To learn more about this study, please contact:

Principal Investigator, Eric Cheng, M.D., M.S.

E-mail: Eric.Cheng@va.gov

Web Resources

For more information about the QUERI program in general,
and to link to all of the individual QUERI Centers,
please go to

www.queri.research.va.gov

The Stroke-QUERI Executive Committee

Each QUERI Executive Committee is led by a research expert and a clinician. The Research Coordinator for Stroke-QUERI is **Linda Williams, M.D.**; the Clinical Coordinator is **Dawn Bravata, M.D.**, the Co-Clinical Coordinator is **Glenn Graham, M.D.**, and the Implementation Research Coordinator is **Teresa Damush, Ph.D.** The membership of the Stroke-QUERI Executive Committee includes: **Barbara Vickrey, M.D., M.P.H. (Chair)**; Pamela Duncan, Ph.D.; Thomas Kent, M.D.; Sarah Krein, Ph.D., R.N.; David Matchar, M.D.; Brian Mittman, Ph.D.; Don and Jan Prether; Mathew Reeves, Ph.D.; and Robert Ruff, M.D.