Primary Stroke Centers May Boost Use of TPA

Improved patient care and wider use of tissue plasminogen activator are likely, experts say.

BY MITCHEL L. ZOLER
Philadelphia Bureau

Acute stroke care in the United States is undergoing a dramatic transformation. The era of primary stroke centers has arrived.

In February 2004, the Joint Commission on Accreditation of Healthcare Organizations began accrediting primary stroke centers. By the end of last year, JCAHO had certified 61 stroke centers and was in the process of reviewing another 68 applications.

Within the next few years, it's likely that about 500 hospitals across the country will be certified as primary stroke centers, predicted Mark J. Alberts, M.D., director of the stroke program at Northwestern University in Chicago, and a developer of the primary stroke center concept.

The process of creating stroke centers is having two effects: identifying the hospitals that are best equipped to diagnose and treat patients with suspected stroke and forcing medical staffs to agree on an in-house protocol that dictates how acute stroke patients will be managed and which types of physicians are responsible.

The net result should be improved patient care and, probably, wider use of tissue plasminogen activator (TPA), experts predict.

Two additional changes now underway will likely further expand the role of neurologists in acute stroke care: establishment of vascular neurology as a recognized subspecialty, and setting a Medicare billing code for treating patients with acute stroke.

The 1996 approval of TPA for treating selected patients with acute stroke meant that stroke was no longer managed exclusively as a chronic disability. The availability of a treatment that was effective only if it was delivered within a few hours of stroke onset put a new premium on the rapid and accurate diagnosis of ischemic stroke, and on the need to rule out hemorrhagic stroke.

Public education campaigns were created so that, ideally, a patient with new-onset symptoms of acute stroke would go to an emergency department, get a brain CT scan, and then an emergency medicine physician would consult with a neurologist and radiologist to decide whether the patient should get TPA.

Unfortunately, it hasn't always worked this way in the ensuing 8 years.

"For a neurologist in an office, it's very disruptive to leave to see a stroke patient [in an emergency department]—it's not very lucrative, and there is medicolegal risk," said Howard S. Kirshner, M.D., vice-chairman of neurology and director of the stroke center at Vanderbilt University in Nashville, Tenn.

"Emergency department physicians often like neurologic backup because a patient is atypical or they are uncomfortable with the diagnosis, but for neurologists there have been many disincentives," said Arthur M. Pancioli, M.D., vice chairman of the department of emergency medicine at the University of Cincinnati.

"Most neurologists are not set up to take emergency calls, and there's a huge economic disincentive because there is no billing code for neurologists to use. They not only have to leave their patients, but they lose money in the process."

The result has been that many acute stroke patients in the United States have not been getting optimal treatment. "Most often, they're not getting TPA when they should," although sometimes they get TPA when they shouldn't, said William G. Barsan, M.D., chairman of the department of emergency medicine at the University of Michigan in Ann Arbor.

"About 3%-4% of acute stroke patients in the United States are getting TPA, even though at least 10% would probably qualify," Dr. Kirshner said. "The biggest factor is that patients don't come for treatment quickly enough."

About 500 U.S. hospitals will likely be certified as primary stroke centers within the next few years.

DR. ALBERTS

But another stumbling block has been that many hospitals have lacked an in-house protocol that either laid out a way for emergency medicine physicians to routinely get a quick neurologic consult, or provided a go-ahead from the hospital's neurologic staff for emergency physicians to give TPA treatment on their own in cases that meet the protocol criteria.

"You don't need a neurologist for every case. You just need a protocol," Dr. Kirshner said. "There needs to be a protocol that neurologists are involved in designing."

When protocols are in place, neurologists are comfortable with treating stroke patients during the chronic, rehabilitative phase even it they were not directly involved in acute treatment.

"What's often lacking is the willingness of a neurologist to take over care of the patient," Dr. Barsan said. "You don't want an emergency medicine physician to treat a patient with TPA and then have the neurologist say, 'I wouldn't have done that.' You need for neurologists to come on board, agree to an acute-treatment protocol, and agree that emergency physicians will give TPA and then the neurologists will take over."

Another new development that will further standardize acute stroke care and the key role of neurologists is the establishment of vascular neurology as a recognized subspecialty. In May , the American Board of Psychiatry and Neurology will administer its first certification examination for the new subspecialty of vascular neurology, which is designed to produce neurologists who are experts in caring for stroke patients.

About 200 neurologists have registered to take the test, said Edgar J. Kenton III, M.D., a neurologist at Jefferson Medical College in Philadelphia and former president of the Neurology Board. With this new subspecialty becoming a reality, fellowship programs are now also starting around the country, he said.

In addition, there is a growing likelihood that the Centers for Medicare and Medicaid Services will soon create a Medicare reimbursement code for acute stroke care.

"The Medical Economics and Management Committee of the American Academy of Neurology has set up a dialogue with CMS," Dr. Kenton told this newspaper. "There already is a reimbursement code for the catheters that deliver thrombolytic therapy during a stroke, so clearly there will be a code for the physicians who use the catheters."

Dr. Kenton was hopeful that a code might be in place before the end of this year. ■

Management of TIA in Emergency Department Cut Costs

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — Managing patients who present to the emergency department with a transient ischemic attack in an ED observation unit rather than admitting them to the hospital reduced costs and lengths of stay for the initial visit, preliminary results of a prospective, randomized study showed.

Investigators randomized 46 patients with a transient ischemic attack (TIA) to be admitted to a hospital bed under the care of their primary physicians. Fifty-three patients were randomized to management by an emergency department physician in the ED observation unit, which was considered an accelerated diagnostic protocol.

The need to admit these patients to inpatient wards has been controversial, with some physicians suggesting that management in an ED observation unit might be more cost effective.

All patients underwent four diagnostic tests: carotid imaging, cardiac ultrasound, cardiac monitoring, and serial clinical evaluations. If all tests were negative, patients were discharged home on appropriate medications. Patients in the observation unit with positive diagnostic test results were considered for admission to a traditional hospital bed.

The ED observation unit group averaged 41 hours from arrival in the ED to discharge, a length of stay 23 hours shorter than the average 64 hours seen in the control group, Michael A. Ross, M.D., said in a poster presentation at the annual meeting of the American College of Emergency Physicians.

The need to admit these patients to inpatient wards has been controversial, with some physicians suggesting management in an ED observation unit.

Seven patients managed initially in the ED observation unit were admitted to the hospital. Even though the length of stay for these patients averaged 167 hours, dramatically shorter stays (23 hours, on average) by the 46 patients who were discharged directly home from the observation unit lowered the overall mean length of stay in that group.

Mean total direct hospital costs (not including professional costs) were lower in the ED observation unit group ($1,392 per patient), compared with the inpatient group ($1,871 per patient), said Dr. Ross of William Beaumont Hospital, Royal Oak, Mich. Again, it was the dramatically lower costs for patients discharged from the ED observation unit ($767 per patient, vs. $5,038 per patient admitted to the hospital from the ED observation unit) that lowered overall costs in that group.

Four patients who were discharged home from the observation unit returned to the hospital within 30 days, compared with no return visits by patients admitted to the hospital either directly or from the observation unit. Costs of return visits were not included in the study.

The incidence of stroke within 90 days of the initial visit was similar between groups, however, with three strokes in the control group and four in the observation-unit group (two each among patients discharged or admitted).

The current study included patients with an emergency physician–confirmed TIA with a resolved deficit, not a crescendo TIA.

Head computerized tomography showed no acute infarct, bleed, or other acute pathology. These or a number of other conditions excluded patients from the study, including a possible embolic source, known carotid stenosis, nonfocal symptoms, severe headache or evidence of cranial arteritis, fever, previous stroke, severe dementia, history of intravenous drug use, residence in a nursing home, or other factors.

The investigators borrowed the accelerated diagnostic protocol concept for TIA from studies of similar ED protocols used to rapidly assess patients with chest pain who are at low to intermediate risk of acute cardiac ischemia. ■