Improving regional stroke care throughout NYS

STAR-NY

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New Study Determines Effective Treatment Time for Ischemic Stroke

When a patient shows symptoms of a stroke, doctors know to act quickly to counteract the effects of the thrombosis, the blood clot lodged in a blood vessel in the brain. No one has been certain, however, how much time can pass before removal of the clot will no longer be beneficial to the patient.

A new study sheds some much-needed light on the question. Recently published in the Journal of the American Medical Association (JAMA), the study is the work of an extensive team of researchers who determined that removing the blood clot has the potential to restore much or all of a patient's normal functioning, even if seven hours have passed since stroke symptoms appeared.

Finding the Seven-Hour Window

The study, led by Jeffrey Saver, MD, at the David Geffen School of Medicine at UCLA, analyzed the data on 1,287 patients in five randomized trials conducted in 2013 and 2014. The investigators who led each of these trials agreed to pool their individual patient data for analysis, with the prior consent of the patients.

These patients all had strokes involving the largest blood vessels in the brain, and had received either intravenous clot-busting drugs (known as tPA), an endovascular procedure called a thrombectomy to remove the blood clot, or both. The endovascular procedure is minimally invasive, using a microcatheter inserted through a tiny incision in the groin area to reach the clot and remove it from the blood vessel.

Saver and his team brought all of the data about these patients together in a single database, and examined the results of each procedure, the patient's outcome, and the length of time from the onset of stroke symptoms until the procedure was performed.

"Thrombectomy up to 7.3 hours after symptom onset was associated with improved outcomes," the study says. "Rates of functional independence after thrombectomy were 64% with reperfusion [restoration of blood flow] at 3 hours vs. 46% with reperfusion at 8 hours."

The researchers concluded that removal of the blood clot could be effective up to 7 hours and 18 minutes after stroke symptoms begin. This means that patients who receive the procedure within this time window are much more likely to recover some or all of their normal function.

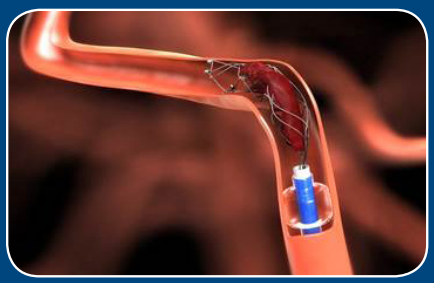
A Responsive Hospital System Delivers Better Results

To make the most of the critical time interval, the study notes the importance of the patient's entire onset-to-treatment experience at the hospital. The process of bringing a stroke patient from the point of entry to the operating room can have a significant impact on the patient's recovery.

"…Among every 1000 patients achieving substantial endovascular reperfusion, for every 15-minute faster emergency department door-to-reperfusion time, an estimated 39 patients would have a less disabled outcome at 3 months," the study says. To shorten the interval between the onset of a stroke and the procedure as much as possible, the patient needs to go directly to a hospital designated as a comprehensive stroke center, where thrombectomy is performed. An article in the September issue of Scientific American notes that if an ambulance brings the patient to a hospital that can provide tPA but not a thrombectomy, hours may elapse while the patient is transferred to a comprehensive stroke center.

In between the ER and the OR, the patient visits the imaging lab, where an imaging scan pinpoints the location of the blood clot in the brain. When patients move quickly from imaging to the endovascular procedure, they also see better outcomes three months later, the study discovered. (This may not be true of patients who already have a great deal of permanently damaged brain tissue, however, as these patients were excluded from four of the five the randomized trials that provided the data.)

This study's findings bring new insights to our growing understanding of stroke, and of the treatment methods that save patients' lives and return them to independence.



Surgical Treatments

Some patients aren't candidates for "clot-busting" drugs and need emergency surgery to treat blocked or bleeding brain blood vessels.

Initial tests (such as a CT angiogram) may show a clot inside an artery, blocking blood flow to the brain ("ischemic stroke"). Our neurosurgeons at the University of Rochester are fellowship-trained to use special catheters and devices to emergently open these brain arteries. This can restore blood flow to the brain, thereby giving patients the best chance of recovery.

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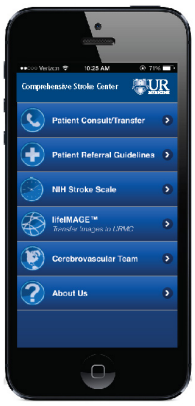
Comprehensive Stroke Center Joint Commission Designation

American Heart Association
American Stroke Association
CERTIFICATION
Meets standards for
Comprehensive Stroke Center

In January 2014, the Joint Commission awarded Strong Memorial Hospital certification as a Comprehensive Stroke Center, a designation conferred by the American Heart Association/American Stroke Association which indicates the hospital has the staff with the expertise, training, and resources necessary to treat the most complicated of stroke cases.

This recognition makes Strong Memorial Hospital the only center of its kind in the region, and one of the elite group of hospitals in the country with this certification.

Mobile Website



Add our mobile web app
stroke.urmc.edu
to your home screen!

- Patient referral guidelines for TIA
- & Acute Stroke
- Calculator for NIHSS & ABCD
- lifeImage transfer instructions
- Quick-dial our stroke team for rapid
- consult/transfer

SAVE THE DATE
6th Annual Regional Stroke Management Symposium

Hyatt Regency, Rochester, NY
Thursday, March 30, 2017
7:30 a.m. - 4:30 p.m.

Agenda will highlight challenges in prehospital care and management of acute stroke in the Emergency Department

Further registration details available at:
starochester.com

Spot a Stroke: How to Recognize a Stroke

A stroke or a "Brain Attack" is a stoppage of blood flow to the brain (like a Heart Attack is stoppage of blood flow to the heart).

It happens because either the blood vessels carrying blood to the brain get blocked by a clot (ischemic stroke) or because the blood vessels in the brain burst (bleeding or hemorrhagic stroke).

As soon as blood flow to the brain is compromised brain cells begin to die – causing damage and loss of function controlled by that part of the brain. This loss of function may manifest in many combination of several ways. Abilities lost may include movement, speech, memory, vision, sensation etc.

A quick and easy way to remember the signs and symptoms of Stroke is: FAST

Face is Asymmetric (ask the patient to show their teeth – one side of the face will be crooked)

Arm is Weak (ask patient to lift both their arms palms up – one arm will start falling down or wont move)

Speech is Slurred (ask patient to repeat a simple sentence – speech may be garbled or may not make sense)

Time to CALL 911. Patients have <4.5 hours to get to the hospital from the onset of stroke symptoms (remember the time you first noticed symptoms start).