

# Telestroke service increases rates of 'clot-buster' treatment for stroke

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A telestroke service increases the rate of effective tissue plasminogen activator (tPA) therapy for patients with acute ischemic stroke treated at community hospitals, according to a report in the October issue of *Neurosurgery*, official journal of the Congress of Neurological Surgeons.

Other studies in the October *Neurosurgery* find that known gene variants don't affect the size of [brain](#) aneurysms and that surgery for a [brain defect](#) called Chiari malformation I (CMI) improves outcomes important to [patients](#).

## Remote Stroke Service Increases tPA Use at Community Hospitals

Dr. Stavropoula Tjoumakaris and colleagues of Thomas Jefferson University Hospital evaluated the effects of a telestroke network including 28 [community hospitals](#) in the Philadelphia area. In the network, stroke specialists used "remote presence" technology to consult on the care of stroke patients seen at hospitals that didn't have a specialized stroke unit. The study evaluated the rate of appropriate treatment with tPA—an effective "clot-busting" drug that can be given only within the first few hours after initial stroke symptoms.

Over 18 months, the service provided nearly 1,650 remote stroke consultations; the average time from request to telemedicine response

was just 12 minutes. About 14 percent of patients received tPA—including nearly all of those who could be treated in the appropriate time window. By comparison, national data suggest that only three to five percent of patients with ischemic stroke receive tPA.

About 80 percent of network hospitals increased their use of tPA for acute [ischemic stroke](#). The percentage of patients transferred to a specialized stroke center decreased as well—possibly because patients began to improve at their original hospital. The researchers conclude, "The results support the implementation of telestroke networks for wider access to [stroke](#) expertise in underserved regions."

## **Gene Variants Show Little Effect on Aneurysm Size**

Dr. Rachel Kleinloog and colleagues of Medical Center Utrecht, The Netherlands, looked for evidence of the effects of gene variants on the size of brain aneurysms. The study included two groups totaling nearly 1,000 patients with ruptured aneurysms of blood vessels supplying the brain.

However, none of seven gene variants previously linked to aneurysms was significantly related to aneurysm size. Average aneurysm size was 7.6 millimeters for patients with a higher genetic risk score versus 7.7 millimeters for those with a lower score. The researchers note that the known variants account for no more than five percent of the genetic risk of aneurysm—other genetic factors affecting aneurysm size and rupture risk may yet be identified.

## **Patient-Reported Outcomes after Surgery for CMI**

Dr. Scott L. Parker and colleagues of Vanderbilt University Medical Center analyzed patient-reported outcomes in 50 adult patients

undergoing an operation called suboccipital decompression for CMI. Chiari malformation I is a brain defect that causes part of the lower brain to be pushed down into the spinal canal. Patients with CMI often have no symptoms until adolescence or adulthood.

Three-fourths of patients had improvement in severe headaches—a major symptom of CMI. Surgery also provided good improvements in abnormal cerebrospinal fluid flow (syringes) and neurological abnormalities. Three-fourths of employed patients were able to return to work.

The study provides important information on key outcomes important to patients, with new insights into the expected benefits of surgery for CMI. "This patient-centered assessment suggests that suboccipital decompression for CMI in adults is an effective treatment strategy," The researchers conclude.

Provided by Wolters Kluwer Health

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