Preventing a second stroke is focus of study at Rush University Medical Center

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Rush University Medical Center is participating in a National Institutes of Health (NIH) study to determine the best course of treatment to reduce the risk of stroke patients suffering another stroke. The study will determine if aggressive treatment of stroke victims for high blood pressure and cholesterol, along with placing a stent to widen a narrowed artery in a patient's brain, is better than intensive medical therapy alone.

The study is called the Stenting versus Aggressive Medical Management for Preventing Recurrent Stroke in Intracrainal Stenosis or SAMMPRIS. The study is the first to look at the long-term benefits of the Wingspan stent, the only FDA approved stent designed to open clogged arteries in the brain.

"Prior to the Wingspan stent, the options for treating stroke patients were limited. Blood-thinning medications are commonly used to treat narrowing of intracranial arteries, but studies have found that stroke patients who had severe artery blockages of 70 percent or more have a 22 percent chance of having another stroke within the first year," said Dr. Shyam Prabhakaran, section head of Cerebrovascular Disease and Neurological Critical Care at Rush

Dr. Demetrius Lopes, neuroendovascular surgeon at Rush, was the first physician in Illinois to use the Wingspan stent. The catheterization procedure involves carefully threading a hair-like filament from a tiny incision on the inside of the thigh through the body's arteries and veins up to the patient's brain. After reaching the site of the blockage, the

plaque-filled brain vessel is first opened using a microscopic balloon that is inflated, pressing aside the blockage. The stent is placed to hold the plaque against the artery wall and keep the blood flowing through the brain.

"Rush has the largest experience with the Wingspan stent in Chicago. The stent has been quite effective in preventing recurrent strokes in more than 100 cases," said Lopes.

A preliminary study released last year that was funded by the NIH found that the Wingspan stent was successfully deployed in nearly all cases and significantly reduced arterial blockages in the short term. But data on the long-term benefit of the stent, compared to medical treatment alone, were inconclusive, prompting the launch of the SAMMPRIS trial.

"A randomized trial such as SAMMPRIS is one of the most powerful scientific tools to bring us definitive answers," said Lopes. "The results from this trial will improve the management of patients at risk for stroke."

In addition, the study will determine the effectiveness of intensive medical management of underlying conditions such as high cholesterol and high blood pressure. There has not been a landmark study looking at how the aggressive treatment of these underlying conditions can benefit stroke victims.

"This is a seminal study, one funded by the NIH and having significant implications on future management of patients with narrowed arteries in the brain," said Prabhakaran. "It will determine whether we should be offering stenting as a primary treatment of narrowed arteries or whether medications are sufficient."

The five-year SAMMPRIS study plans to enroll 764 patients from

approximately 60 sites in the Unites States. Intensive medical therapy for all participants will consist of aspirin, clopidogrel (a blood thinner), and aggressive risk factor management primarily targeting blood pressure and cholesterol. Approximately half of the patients in the trial, selected randomly, will have a stent placed. Study participants will be evaluated by a neurologist every four months and will meet with internists who will manage the vascular risk factors.

To be eligible for this trial, patients must be between the ages of 30 and 80 years, have had a stroke or TIA within 30 days, and have stenosis (narrowing) of a major intracranial artery (blood vessel in the brain).

Source: Rush University Medical Center