Researchers Recommend Screening to Reduce Stroke Risk

from *Clinical Update*, Fall 2004

Abstract: New evidence confirming that endarterectomy can dramatically reduce stroke risk means more people should get the treatment—and points out the need for screenings to diagnose carotid stenosis—say researchers from Wake Forest Baptist.

"We now know definitively that we can reduce stroke risk by half with endarterectomy—even in patients who have no symptoms," says neurologist James Toole, M.D. "We should offer this option to more patients, as well as begin screening seemingly healthy individuals for stroke risk."

Toole's comments are in response to a report in The Lancet on the "Asymptomatic Carotid Surgery Trial," a study based in England of more than 3,000 patients. The results— that endarterectomy can significantly reduce stroke risk— were nearly identical to the findings of a study that Toole coordinated in the United States and Canada.

Both studies looked at the value of endarterectomy in people who have no symptoms, but whose carotid arteries were narrowed by at least 60 percent. The surgery is typically offered only to patients who have symptoms of an impending stroke.

The idea that surgery can be beneficial for people without symptoms was not easy for physicians and researchers to believe when it was first reported in 1995, says Toole. "People were so astonished by this they thought the data were flawed. That led to the European study."

The trial involved 126 hospitals in 30 countries. It randomized people with narrowed vessels to receive either surgery or daily aspirin and management of risk factors. About 12 percent of those in the non-surgery group had strokes, half of them fatal or disabling. In the surgery group, 6 percent had strokes—a risk reduction of 50 percent.

From 1987 to 1993, Toole and colleagues conducted a similar study of 1,662 participants in the United States and Canada. That study, Endarterectomy for Asymptomatic Carotid Artery Stenosis, or ACAS, found that 11 percent of participants who were treated with medication had strokes. In the surgery group, the incidence was 5.1 percent—a 53 percent reduction.

"The research results, which confirm a benefit of surgery to prevent stroke in people who had no symptoms, despite having severely narrowed arteries, highlight two important issues for stroke prevention," says Charles Tegeler, M.D., professor of neurology. "First, we need to screen more adults for narrowed carotid arteries. Second, patients with severe carotid narrowing should at least be considered for the surgery as a stroke-prevention treatment."

Toole recommends that men undergo a baseline screening of their carotid arteries between the ages of 50 and 60, depending on their overall health. Toole believes men and women with diabetes, hypertension or a family history of stroke—all which increase stroke risk—should be screened in their 40s.

While a majority of endarterectomies in the United States are performed under general anesthesia, the surgery can be performed under local or regional anesthesia. Wake Forest Baptist neurosurgeons perform most of the procedures with the patient awake—and believe it helps produce a low complication rate.

Neurosurgeon John Wilson, M.D., said performing the surgery while the patient is awake allows even higher-risk patients to have the procedure with a low rate of complications.