Carotid Artery Bypass Is Getting a Second Look

BY PATRICE WENDLING
Chicago Bureau

Long abandoned as ineffective at secondary stroke prevention, carotid artery bypass surgery for complete atherosclerotic occlusion is getting a second look.

Known as extracranial/intracranial (EC/IC) bypass, the procedure involves surgical anastomosis of the superficial temporal artery to the middle cerebral artery (STA-MCA). It is getting its second chance to prove its effectiveness in selected patients for complete carotid occlusion because technologic advances, such as refinement of PET, have made it possible to identify which patients are the best candidates for the procedure.

EC/IC bypass surgery has been shown in a series of small studies to normalize the oxygen extraction fraction (OEF), a marker of impaired cerebral blood flow in patients with carotid occlusion. Whether that translates into a decreased stroke risk is the subject of the Carotid Occlusion Surgery Study (COSS), a $21 million, 7-year trial funded by the National Institutes of Health that is now underway in 28 U.S. centers.

Candidates for the trial must be patients with symptomatic carotid occlusion and increased OEF on PET. To date, 169 patients have enrolled, and 38 patients have been randomized to treatment. Enrollment in the nonblinded, controlled clinical trial has been slow, in part because few neurologists knew the operation of bypass surgery existed, said Colin Derdeyn, M.D., principal investigator for bypass surgery existed, said Colin Derdeyn, M.D., principal investigator for carotid occlusion. The researchers were unable to assess whether the procedure was more appropriate for one or another group of patients based on their cerebral hemodynamics because at the time the technology necessary to understand and measure cerebral blood flow had not been developed, according to M. Gazi Yasargil, M.D., professor of neurosurgery at the University of Arkansas, Little Rock, the Swiss neurosurgeon who pioneered the surgical procedure. “The time is ripe to work out a perfect indication for bypass surgery,” he said.

Study showed no benefit for the prevention of subsequent stroke among 808 patients with symptomatic carotid occlusion, despite restoring blood flow to the carotid artery in 96% of cases (N. Engl. J. Med. 1985;313:1191-200).

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BY TIMOTHY F. KIRN
Sacramento Bureau

SAN ANTONIO — Prednisone treatment for rheumatoid arthritis patients was associated with an approximately 50% increased risk of stroke, according to figures from the National Data Bank for Rheumatic Diseases.

Treatment with infliximab was associated with a 10% decreased stroke risk. These findings don’t in any way prove cause and effect, the study’s lead investigator, Frederick Wolfe, M.D., cautioned in an interview. But they are suggestive of a trend. They may also challenge some assumptions among providers. “There is a belief that low-dose prednisone is a benign drug treatment,” said Dr. Wolfe of the National Data Bank. “I don’t think it is.”

Dr. Wolfe, who presented his findings in a poster presentation at the annual meeting of the American College of Rheumatology, said that his look at the incidence rate of stroke in rheumatoid arthritis (RA) patients was prompted by a request from investigators at the National Institutes of Health, who wanted to know about stroke risk and infliximab treatment. The study used data from 15,670 RA patients and 3,083 osteoarthritis patients, who were followed for a 3-year period ending in 2003.

RA patients had a higher incidence of stroke than did the osteoarthritis patients, with a hazard ratio of 1.26. This increased risk was independent of age, gender, diabetes, and hypertension. The incidence rate in the RA patients was equal to 8 cases per 1,000 patient-years.

Among the RA patients, stroke risk was increased in those on prednisone, with a hazard ratio of 1.52, and decreased in those on infliximab, with a hazard ratio of 0.49. Concurrent methotrexate therapy did not appear to have an impact on risk of stroke.

Sufasalazine treatment was also found to be associated with a 50% decreased risk; however, there were too few patients in the group who took sulfasalazine for that finding to be considered statistically significant, Dr. Wolfe noted.