In a metaanalysis, rates of periprocedural death and stroke were higher in patients treated with stents. ‘We have to wait for at least 2 years, and even better would be to wait for 3, 4, or 5 years to look at stroke prevention’ by the two interventions.

BY MITCHEL L. ZOLER
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Philadelphia — The periprocedural rate of death or stroke in patients undergoing carotid artery stenting was about 40% higher than for similar patients who had a carotid endarterectomy, on the basis of a metaanalysis that included data from seven trials with nearly 3,000 patients.

This is the first statistically significant difference seen in serious adverse events during the first 30 days following treat-
ment with these two alternatives for man-
aging clinically significant carotid stenosis.

The new analysis included recently re-
ported results from two European studies, which together doubled the number of pa-
tients available for the combined analysis, Dr. Hans-Henning Eckstein said at the Vascular Annual Meeting.

He cautioned that the finding was from a preliminary analysis that included as yet unpublished data.

In addition, ‘we have to wait for at least 2 years, and even better would be to wait for 3, 4, or 5 years to look at stroke preven-
tion’ by the two interventions, said Dr. Eckstein, head of the division of vascular surgery at the Technical University of Mu-

nich. But, he added, the new metaanaly-
sis and its focus on the rate of 30-day death or stroke is useful for helping patients se-
lect a type of carotid intervention they would prefer.

Until this spring, five reported studies had compared carotid artery stenting with endarterectomy in randomized, con-
trolled trials. These five studies involved a total of 1,269 patients, and a metaanalysis published about a year ago, showed that the incidence of any stroke or death during the first 30 days was 33% higher in patients treated with stent-
ing, compared with those who had en-
darterectomy (Stroke 2005;36:905-11). But this difference did not reach statistical sig-
ificance.

One of the new studies, the Stent-Pro-

tected Percutaneous Angioplasty of the Carotid vs. Endarterectomy (SPACE) tri-

al, included 1,183 patients, who were treat-
et at any of 37 medical centers in Ger-

many, Austria, or Switzerland.

All of the SPACE patients were symp-

tomatic (with amaurosis fugax, a tran-
sient ischemic attack, or a stroke within the previous 180 days) and also had at least 50% stenosis in their carotid artery based on the criteria of the North American Symptomatic Carotid Endarterectomy Trial (NASCET).

Patients who were randomized to stent-
ing could be treated with any of three dif-

cent carotid stents: the Acculink, the Pre-
cise, or the Wallstent. Treatment with an embolic-protection device was optional, and was used on about a third of the patients.

The outcomes of the patients treated with embolic-protection devices were no different from those in whom no device was used. The study was primarily sponsored by the Ger-

man Ministry of Science, but it also re-

ceived support from Guidant Corp., which markets the Acculink stents, and from Boston Scientific Corp., which markets the Wallstent.

The periprocedural rate of death or stroke was 6.84% in the patients treated with carotid stenting and 6.34% in those treated with endarterectomy—a non-
significant difference Dr. Eckstein reported.

Results from a similarly designed French study were reported in mid-May at the Eu-

ropean Stroke Conference in Brussels. The Endarterectomy vs. Angioplasty in Patients with Symptomatic Severe Carotid Stenosis (EVA-3S) study enrolled 520 pa-
tients. The 30-day rate of death or stroke was 9.6% in 261 patients treated with carotid stenting and 9.9% in those treated with endarterectomy.

When the results of both the SPACE and EVA-3S trials were added to the pre-
viously reported metaanalysis results, the overall numbers showed an 8.2% peripro-
ceedural death or stroke rate among 1,492 patients treated with stenting, and a 5.9% rate among 1,480 patients treated with en-
darterectomy, a significant difference.

‘I’m sure there will be a place for carotid stenting in the future,’ but randomized, controlled trials against endarterectomy must be done to determine its proper role, Dr. Eckstein said.

In addition, there may now be enough experience in the metaanalysis database to run stratified analyses and identify which subgroups of patients did best. The ex-

perience and technique of the operators will also be an important factor. In the multicenter results that Dr. Eckstein re-

ported, there was a clear difference in out-

comes among the centers; one hospital had a perioperative event rate of more than 20%.

BY MITCHEL L. ZOLER
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Philadelphia — Endovascular aneurysm repair should be used more ag-

geressively to treat ruptured abdominal aneurysms, Dr. Richard W. Lee said at the Peripheral Vascular Surgical Society session at the Vascular Annual Meeting.

A 4-year, single-center experience re-

pairing ruptured abdominal aortic aneurysms (AAA) suggested that en-

dovascular aneurysm repair (EVAR) re-
sults in a lower mortality rate during ini-
tial hospitalization, compared with open repair. Surgeons at Strong Memorial Hos-

pital and the University of Rochester (N.Y.) tended to use EVAR in patients who had hemodynamic instability. The best reason to use EVAR is the right aortic anatomy in the patient, but the review showed that an anatomic assessment was not always used to guide the choice of re-

pair, said Dr. Lee, a vascular surgeon at the University of Rochester.

The chart review included 52 patients with a ruptured AAA who were treated at the University of Rochester during June 2002 through March 2006. The se-

ries included 17 patients who were treat-
ed with EVAR, 20 who underwent an in-

frarenal open repair, and 15 who had a para-

renal open repair.

Death while in hospital occurred in 35% of patients treated with EVAR, 47% of patients who had a pararenal repair, and 75% of those with an infrarenal re-

pair. Estimated blood loss and hospital length of stay were also reduced by EVAR (see box).

The overall 54% in-hospital mortality rate in the series compares with a 35% rate at the same hospital during the 4 years immediately before June 2002, Dr. Lee said.

Although EVAR appeared to cut the rate of perioperative mortality, the re-

view raised the question of whether this finding was primarily caused by a selec-
tion bias, with a higher proportion of hemodynamically stable patients under-

going EVAR. Among the 17 patients treated with EVAR, 53% were stable, compared with 33% of patients who had pararenal re-

pair and 25% of those who had in-

frarenal repair. Hemodynamic instabili-

ty was defined as a systolic blood pres-

sure of less than 120 mm Hg, a heart rate of more than 100 beats/minute, and a respiration rate of 20 breaths/minute or greater.

But EVAR appeared to result in better survival even among unstable patients. In this subgroup, EVAR led to a 25% mor-

tality rate, compared with a 40% death-

rate following pararenal repair and a 73% mortality rate following infrarenal repair.

The series review also showed that about half of the patients who underwent open repair had an aneurysm anato-

my that was amenable to EVAR. In order to ensure that patients who are suitable are given the EVAR option, get a CT scan on all patients and then decide whether EVAR is possible based on the patient’s anatomy, Dr. Lee said.

Type of Repair | Number of Patients | Estimated Blood Loss | Hospital Length Of Stay
--- | --- | --- | ---
Endovascular | 17 | 790 mL | 10.7 days
Pararenal open repair | 15 | 6,675 mL | 29.5 days
Infrarenal open repair | 20 | 5,387 mL | 25.8 days

Source: Dr. Lee

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