

Long-Term Cognition Better With OPCAB

BY BRUCE JANCIN

ORLANDO — Patients treated with off-pump coronary artery bypass graft surgery had significantly better long-term neurocognitive function, compared with those who got percutaneous coronary intervention, in the first-ever randomized head-to-head comparison of the revascularization methods focusing on cognitive outcome.

At 7.5 years' follow-up in the Dutch multicenter Octopus Study, overall scores on a standardized neurocognitive test battery were significantly better in the off-pump coronary artery bypass (OPCAB) group, Dr. Jakub J. Regieli reported at the annual scientific sessions of the American Heart Association.

The OPCAB group scored significantly higher on four of the seven cognitive domains measured: visual memory, motor capacity, divided attention, and learning. Scores on the other three domains—reaction time, decision making, and working memory—also consistently favored the OPCAB patients, although in those instances the advantage fell short of statistical significance, according to Dr. Regieli, a cardiology fellow at the University of Utrecht (the Netherlands).

But discussant Robert C. Robbins was not buying Octopus. "I really have to question whether PCI would give worse

neurocognitive function. I can tell you as a surgeon that if I had the choice of having a stent versus CABG, I'd take a stent every time—and I think I'd be smarter in the end," said Dr. Robbins, professor and chairman of the department of cardiothoracic surgery at Stanford (Calif.) University.

There are several sound reasons for a patient to opt for OPCAB rather than PCI—a lower repeat revascularization rate, vessels unsuitable for stenting—but an expectation of better cognition outcome isn't one of them, Dr. Robbins said.

The Octopus population comprised 280 low-risk patients with preserved left ventricular function, single-vessel disease, and a mean age of 60 years.

The composite cardiac end point, which comprised death, stroke, or MI, occurred in 17.4% of the PCI group over the course of 7.5 years and was not significantly different, at 19.2%, in the OPCAB group. The mortality rate was 8.7% with PCI and 13.4% with OPCAB, a nonsignificant difference. But the 21.7% repeat revascularization rate in the PCI

group was significantly higher than the 11.3% rate with OPCAB.

Manipulation of the aorta occurred in 100% of PCI patients but in only 15% of those who received OPCAB. That difference plays a key role in the Octopus investigators' interpretation of the cognitive outcome differences.

"It's known from imaging data that microemboli do occur during PCI. We would hypothesize that subclinical cerebral injury during repeated cardiac catheterization in the PCI-treated patients may have led to worse cognitive performance in that group," Dr. Regieli explained.

Dr. Regieli added a caveat: PCI in Octopus was performed in the bare metal stent era. Contemporary PCI with drug-eluting stents has a lower repeat revascularization rate, and that might well spell better neurocognitive performance. None of the cardiac findings is really surprising, in Dr. Robbins' view. The neurocognitive results are a different matter. He noted that 25% of patients in the PCI group did not undergo neu-

rocognitive testing, compared with 13% in the OPCAB group—a difference that could have influenced the results. Also, no baseline neurocognitive testing was done prior to revascularization.

When Octopus was being planned over 8 years ago, there was widespread high hope that OPCAB was the answer to the neurocognitive impairment that often follows on-pump CABG, but that hope has not been fulfilled.

Now most heart surgeons consider the recently published Veterans Affairs Randomized On/Off Bypass (ROOBY) study the definitive statement, according to Dr. Robbins.

ROOBY randomized 2,203 patients scheduled for CABG to OPCAB or on-pump surgery. No significant differences between the techniques were found in neurocognitive outcomes (N. Engl. J. Med. 2009;361:1827-37).

Dr. Robbins said the hypothesis that manipulation of the aorta increases the likelihood that atheromatous microemboli will get knocked loose and injure the brain is intriguing. But "the 60-year-olds that I operate on don't have a lot of atheroma in the aorta," he observed.

The Octopus Study was funded by the Netherlands National Health Insurance Council. Dr. Regieli and Dr. Nathoe reported having no conflicts of interest. ■

The off-pump coronary artery bypass group scored significantly higher on four of the seven cognitive domains measured, and nonsignificantly higher on the remaining three.

Post-PCI Cardiac Risk Up With Clopidogrel + PPI

BY SHERRY BOSCHERT

SAN DIEGO — Prophylactic use of a proton pump inhibitor plus clopidogrel after percutaneous coronary revascularization was associated with significantly greater risk for cardiovascular events, compared with clopidogrel alone, a small retrospective study found.

After percutaneous coronary intervention (PCI), 40 (56%) of 72 patients who were discharged on concomitant clopidogrel and proton pump inhibitor (PPI) therapy developed major adverse coronary events over a mean follow-up of 50 months, compared with 92 (38%) of 243 patients discharged on clopidogrel alone, Dr. Ekta Gupta and her associates reported at the annual meeting of the American College of Gastroenterology.

After adjustment for baseline characteristics including the type of stent, patients in the combination-therapy group had a 95% excess risk for major adverse coronary events, said Dr. Gupta of the University of Arkansas, Little Rock.

"Our study suggests that 'routine' use of prophylactic PPIs to

prevent gastrointestinal bleeding should be avoided" until results of prospective, randomized, controlled studies become available, she said.

The adverse coronary events studied included cardiac or non-cardiac death, MI, and target vessel failure (defined as a composite of cardiac death, MI, or target vessel revascularization).

Most patients who got a PPI used rabeprazole, with a minority getting omeprazole or lansoprazole. The study excluded patients who received pantoprazole or esomeprazole because previous studies found no association between these two drugs and an impaired response to clopidogrel seen with the other PPIs, suggesting that the adverse PPI-clopidogrel interaction may not apply to the whole class of drugs, she said.

If a PPI is needed after PCI, it may be preferable to use esomeprazole or pantoprazole, Dr. Gupta said. Alternatively, clinicians may want to consider separating the dosing of clopidogrel and the PPI to avoid any potential drug-drug interaction, she said.

Dr. Gupta had no conflicts of interest related to this study. ■

Outcomes of Antihypertensive Therapy Vary for Men vs. Women

BY BRUCE JANCIN

ORLANDO — Hypertensive women experience significantly less regression of left ventricular hypertrophy than do men in response to equal pharmacologic lowering of blood pressure, yet their resultant reduction in cardiovascular events is just as great.

This new finding in a secondary analysis of the LIFE (Losartan Intervention for End Point Reduction in Hypertension) trial suggests that the optimal degree of left ventricular hypertrophy (LVH) regression is different in men and women, Dr. Peter M. Okin observed at the annual scientific sessions of the American Heart Association.

LIFE involved 9,193 hypertensive patients with ECG evidence of LVH, including 4,963 women. Participants were randomized to losartan- or atenolol-based antihypertensive therapy with as-needed hydrochlorothiazide to a target blood pressure of 140/90 mm Hg or less. The primary results showed significantly better

outcomes in the losartan arm (Lancet 2002;359:995-1003).

In the new secondary analysis, unadjusted 5-year rates of MI, stroke, cardiovascular death, and a composite of the three end points were all significantly lower in women than men, regardless of treatment arm. (See box.)

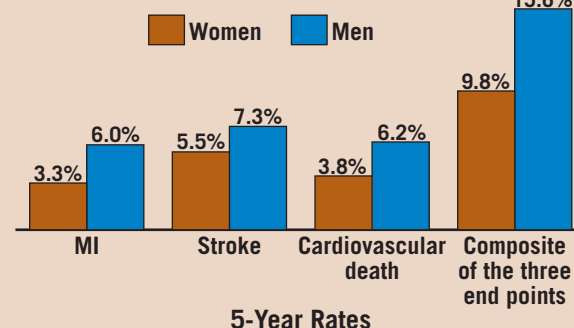
Yet women experienced less LVH regression: a mean 3.0-mm reduction in Sokolow-Lyon voltage from a baseline of 28.2 mm, compared with a

4.8-mm decrease from a baseline of 32.1 mm among men, according to Dr. Okin of Cornell University, New York.

Mean baseline blood pressure was 173/99 mm Hg in men and 175/97 mm Hg in women. The men had a mean 30/18-mm Hg reduction in blood pressure, compared with 29/17 mm Hg in women.

The LIFE study was supported by Merck & Co. Dr. Okin reported having no relevant financial conflicts. ■

Gender Differences Favor Women in Antihypertensive Therapy



Note: Based on LIFE study of 9,193 patients with LVH.
Source: Dr. Okin