difference in incidence of cognitive decline between patients undergoing on-pump and off-pump procedures was found 3 months after CABG, which almost disappeared 1 year after operation [6]. Finally, it is conceivable that a higher incidence of self-reported cognitive failures can be found in older CABG patients with more comorbidity.

In conclusion, we did not find an increase in self-reported cognitive failures in CABG patients 1 year after operation. Moreover, there was no difference in reported cognitive failures between patients undergoing on-pump and off-pump CABG. In contrast, we found a higher rate of self-reported cognitive failures in healthy control subjects than in CABG patients. The present findings suggest that CABG does not result in a substantial proportion of patients with subjectively experienced cognitive decline 1 year after operation, irrespective of the type of surgical technique (on-pump versus off-pump).

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INVITED COMMENTARY

"Measure all that is measurable, and make those things measurable, which have hitherto not been measured."
Galileo Galilei

For those investigators trying to assess neurobehavioral outcomes following cardiac surgery, the traditional use of stroke rates to determine outcome has become obsolete unless the number of patients in the study is quite large. This is because stroke, as assessed by neurological examination, is rare in most modern clinical series. Thus it has been necessary to use more intricate testing to measure subtle neurobehavioral outcomes, and this study is no exception. The authors found no differences in quality of life as assessed, at one year postoperatively, by Cognitive Failures Questionnaire (CFQ) and the so-called Worry Index. In addition, there were no differences between patients operated on using cardiopulmonary bypass or an off-pump technique in this small patient sample. The neurobehavioral outcome of this particular data set has been reported in several different journals using several different measuring techniques. This patient group is relatively young and has few co-morbidities, and thus good results should be expected; for this, the authors should be congratulated.

Of interest, a group of "healthy controls" had more cognitive deficits, as measured by the CFQ, than the surgical group. The authors present numerous reasons why this may have been the case but, suffice it to say, the group contained more females and were more highly educated, and thus may have been more aware of their own personal health status and more likely to report cognitive difficulties. Anecdotal reports from patients regarding cognitive failures are fortunately quite rare in our specialty. Thus measuring tools, which rely on patient self-assessment, are the least accurate outcome measure. A more accurate instrument has been developed to assess cognitive performance, which is usually referred to as neuropsychological tests. When batteries of these tests are given pre- and postoperatively to patients having cardiac operations, a substantial number demonstrate postop deficits, particularly early after operation. It has been the goal of cardiac surgical teams to reduce these deficits by altering intraoperative anesthetic and surgical techniques to ameliorate brain dysfunction early after operation and to limit the size of ischemic lesions in the brain induced by particulate embolism.

In our own institution, the neuropsychological deficit

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rate has been reduced from >30% at one month following surgery to <20% in our current series. The results of this reported study, and many in the literature, should make surgeons feel good about current techniques for performing cardiac surgery in reference to postop CNS function. It is hoped that continued investigation in this area will permit advanced surgical techniques to be used on high-risk groups of patients who are elderly and have extensive peripheral vessel atherosclerosis, so that improved neurobehavioral results will be obtained.

John W. Hammon, MD

Department of Cardiothoracic Surgery
Wake Forest University School of Medicine
Medical Center Boulevard
Winston-Salem, NC 27157
e-mail: jhammon@wfubmc.edu.

Notice From the American Board of Thoracic Surgery

The 2003 Part I (written) examination will be held at the Radisson Hotel O'Hare, Rosemont, Chicago, IL, on November 23, 2003. The closing date for registration is August 1, 2003. Those wishing to be considered for examination must request an application because it is not automatically sent.

To be admissible to the Part II (oral) examination, a candidate must have successfully completed the Part I (written) examination.

A candidate applying for admission to the certifying examination must fulfill all the requirements of the Board in force at the time the application is received.

Please address all communications to the American Board of Thoracic Surgery, One Rotary Center, Suite 803, Evanston, IL 60201; telephone: (847) 475-1520; fax: (847) 475-6240; e-mail: abts_evanston@msn.com.