

Cognitive changes

and retirement

among senior surgeons

by

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Deciding whether to reduce one's workload or to retire can be difficult and often involves less than ideal circumstances. Rather than risk a damaged reputation, many surgeons would benefit from objective measurement of the incapacable effects of aging so they can make data-driven, informed decisions about their futures.

Background

Several years ago, some colleagues and I performed a longitudinal study on a small group of surgeons using the Microcog Assessment of Cognitive Functioning test. The mean age of the cohort at the inception of the study was 56 and included both practicing and retired surgeons. Variables such as verbal memory, visual spatial memory, reasoning, attention, and number facility were measured. Five years later, the cohort, with a mean age of 61, was retested using the same instrument. We were unable to detect a statistically significant difference within subjects or the group as a whole, leading to three possible conclusions: no actual change occurred over this five-year interval, the sample size was too small to detect differences, or the test itself could not discern the subtle levels of change. Because it is unlikely that surgeons are immune from the effects of aging, we assumed we were dealing with inadequate sensitivity.

New test

So a new test, the Cambridge Neuropsychological Test Automated Battery (CANTAB), was developed. The CANTAB is being used now because it is believed to be superior in detecting subtle cognitive changes. In fact, more than 160 published studies have shown that the CANTAB is sensitive to cognitive changes over a wide range of medication effects and brain disorders. In addition, a normative database has been used and validated in more than 3,000 patients ranging in age from four to 90 in research studies on four continents.¹⁻³

The test was conducted during the 2001 Clinical Congress in New Orleans, LA, under the sponsorship of the College. Within the constraints of time and available computers, we were able to complete the CANTAB protocol on 75 surgeons. In the future, we plan to recruit a much larger population of surgeons with a wider range of age. Subjects who participate will be tested on two occasions over the

course of the coming one to four years. This system will allow us to evaluate objective evidence of the preservation or deterioration of cognitive ability.

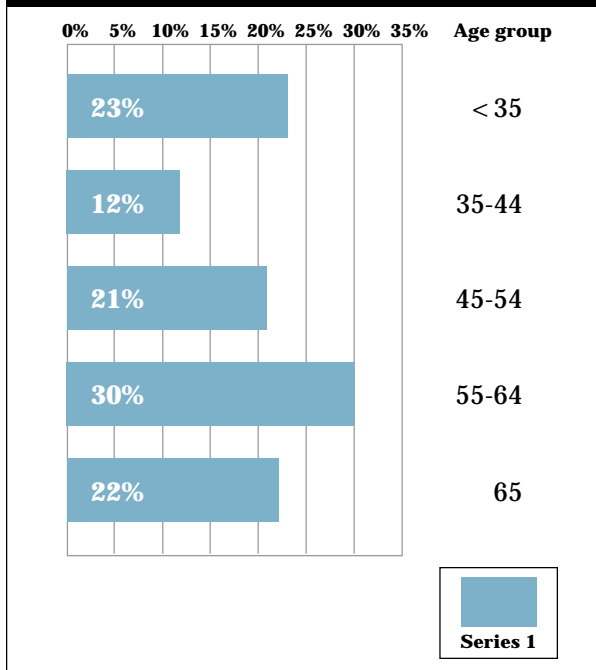
The study design calls for comparison of scores over time, with the initial test providing the baseline. Surgeons age 45 or older were included in the original group, and we did a preliminary review of the data compared to the norms for this test that was controlled for age and IQ. All of the individuals who took the test were within the range of normal for cognitive variables. With one exception considered to be a probable invalid test, the measured reaction times were significantly faster than predicted. Those who provided the name of their personal physician will receive a report indicating how their performance compared to age-matched peers. For each of the next four years, we plan to test an additional cohort of surgeons and to retest the entire group in year five. Data will be provided privately to the physicians to protect the information from medicolegal discovery and to assist them in making appropriate decisions regarding their practice and career.

Initial results

We took advantage of the booth located in the exhibit area of the 2001 Clinical Congress to ask all visitors to complete a self-report survey. The majority of the 321 respondents were in private or group practice and only those people less than 35 years of age reported a higher percentage of academic affiliation than their peers. Age distribution of the respondents is shown in the figure on this page. A reported decline in clinical workload began in the age group more than 45 years of age, as did a decrease in complexity of cases managed. While this tendency increased in each age group, only 24 percent reported a decline in workload and 17 percent a decrease in the complexity of their cases. Deterioration of information recall was also reported in 6 percent of those age 45 to 54, but increased to only 9 percent of those 55 to 64 years old, and 7 percent of those over 65, rates comparable to declining name recognition. Overall, 27 percent reported a decline in name recognition ability.

Regarding mastery of new technology in the field, such as laparoscopy or endovascular techniques, the majority of respondents in all age groups indicated that they had actively learned to successfully

Age distribution of responders to the self-report survey used at the 2001 Clinical Congress



use it or contributed to its further development. Only 5 percent of the respondents up to age 55 classified themselves as spectators to new technology, and only 13 percent of the individuals over age 55 placed themselves in that category.

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for the course includes: Josef E. Fischer, MD, FACS; Lazar J. Greenfield, MD, FACS; J. Patrick O'Leary, MD, FACS; and Jon A. van Heerden, MD, FACS. The topics include the use and abuse of guidelines in evidence-based surgery, controlling liability by correcting weaknesses through self-assessment and targeted continuing medical education, safe integration of new technologies into active practice, workload and liability, and communication skills as shields from liability.

Despite surgeons' careful attention, patients occasionally pursue litigation. Session II, The Surgeon's Personal Guide to

Trial Participation, will assist surgeons in such matters, making points through the medium of a mock trial and related didactic presentations.

Mock trials are unrehearsed, exciting, entertaining vehicles for education. Having presented similar trials for other groups of physicians and attorneys, the faculty for this course is dynamic and experienced. Other pertinent topics will be presented, including medical malpractice from a plaintiff attorney's perspective and a timely overview of the current medical malpractice insurance crisis.

Session I of PG No. 30 will be

held on Wednesday, October 9, 8:30 am - 12:00 noon, and Session II will be held on Thursday, October 10, 8:30 am - 12:00 noon. Fellows may subscribe to either session or the entire course at their discretion.

Look for more details in your ACS Clinical Congress Program Planner, which will be mailed this month, or contact Ruth Shea at College headquarters, tel. 312/202-5413, e-mail rshea@facs.org.

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With regard to physical activity, although 32 percent of all age groups indicated that they had reduced the level and intensity of their participation in recreational sports, only 14 percent indicated that they had abandoned one or more activities in favor of less demanding recreation. The remainder indicated that they had maintained or actually increased the level and intensity of participation. Age did take its toll on vision, however, as the use of bifocals for reading progressed from 2 percent among the respondents less than 35 years old, to 10 percent among the respondents ages 35 to 44, 15 percent of the people age 45-54, and 22 percent of those individuals more than 55. The majority of the remainder were likely to use reading glasses rather than bifocals, because only 5 percent of each age group over age 45 reported that they could read the newspaper without assistance.

Concerning retirement, 24 percent of respondents indicated plans to retire within five years, while 27 percent indicated that they would retire at a predetermined age. Rather than use age as the decision to retire, 39 percent of the respondents said that they would retire when they felt that their

skills were deteriorating, and 12 percent indicated that they already were retired.

There seems to be a high level of interest in all of the issues surrounding the performance of aging surgeons and the decision to retire from active practice. We feel that by tracking these measures of performance, we can provide feedback to the Fellows to assist them in making informed decisions; we are most grateful to those who have chosen to participate. □

References

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3. Robbins TW, James M, Owen AM, et al: A neural systems approach to the cognitive psychology of aging using the CANTAB battery. In: *Methodology of Frontal and Executive Function*. Hove, East Sussex: Psychology Press, 10:215-238, 1997.