HEALTH

Study Links Surgery to Mental Declines in Elderly

By CHRISTOPHER WINDHAM

Many elderly patients undergoing major noncardiac surgery experience sustained declines in cognitive function two years following the operation, researchers report.

The study builds on earlier research that suggested patients undergoing heart surgery suffered from declines in mental function afterward. The study is among the first to indicate that such cognitive shortfalls can occur in older patients undergoing noncardiac surgery.

Researchers at Duke University Medical Center, based on 354 patients age 60 or older undergoing scheduled operations that required anesthesia, found that 59% of them suffered from cognitive declines at hospital discharge. Patients were given a battery of cognitive tests before surgery, at discharge, three months after surgery and two years later. The surgeries were primarily orthopedic, including knee and joint replacements.

Three months after surgery, the study found that 34% of the patients had cognitive declines. But when they were tested again after two years, 42% of all patients had declines in cognitive ability. In a control group of elderly people who didn't have surgery, there was no measurable change in their mental functions, said Terri Monk, a professor in Duke's Department of Anesthesiology. Researchers reported the results at the annual meeting of the American Society of Anesthesiologists in Las Vegas.

The results illustrate a pattern where elderly patients experience measurable cognitive decline after major surgery, followed by initial improvement and a long-term decline, researchers said.

Moreover, the results suggest cognitive decline at discharge is a strong predictor of a deficit after two years.

"Initial cognitive decline after surgery is predictive of long-term cognitive problems," Dr. Monk said. "We're going to have to do additional studies looking at the cause of these problems." The study wasn't designed to determine the causes of the decline.

There are some factors from the surgery that could contribute to the cognitive decline, such as stress from the operation and the anesthesia, researchers said.

One theory holds that the effects of the anesthesia on the brain cells aren't completely reversed after surgery.

But without more studies, "we don't know whether this [cognitive decline] is related to anesthesia or the surgery," said J. S. Gravenstein, graduate-research professor emeritus at the University of Florida, who wasn't involved in the study.