



Bariatric Surgery Does Not Improve Survival

Lisa Nainggolan, Seattle, Washington | June 13, 2011

A new study in **Veterans Affairs** (VA) patients has found no survival benefit associated with bariatric surgery among older, severely obese people when compared with usual care, at least out to seven years [1]. Dr **Matthew L Maciejewski** (Durham VA Medical Centers, Durham, NC) presented the findings here yesterday at the **AcademyHealth Annual Research Meeting**, and they were published simultaneously in the *Journal of the American Medical Association*.

Maciejewski told heartwire that doctors "should counsel their patients that there are numerous significant benefits to bariatric surgery--including the fact that it's the most effective weight-loss treatment, and it improves the control of chronic conditions and quality of life--but there doesn't appear to be a survival benefit at nearly seven years." It is possible that there will be a survival benefit longer term, he says, and his group is continuing to follow these patients and add in others who have had surgery more recently.

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The new findings contrast with those of prior studies, many of which have shown survival benefits with bariatric surgery, but most of which have examined outcomes in younger, primarily white, and female populations, said Maciejewski. But obesity-related mortality is highest in men and minority patients, who have high rates of comorbid diseases, and this is the first study that has looked at long-term survival in such high-risk patients, he points out.

In addition, in this work, statistical analyses were employed, which "represent an advance over prior work. The VA has really rich data sets, and we had body-mass-index [BMI] information on all patients, including the nonsurgical controls," information that provides for more robust results, Maciejewski explains.

Adjustment for Confounding an Important Aspect of the Study

Maciejewski et al conducted a retrospective, cohort study of bariatric-surgery programs in VA medical centers, including 850 veterans who underwent Roux-en-Y gastric bypass from January 2000 to December 2006. The population was 74% male, the mean age was 49.5 years, and the mean BMI was 47.4. Race/ethnicity was 78% white, 16% nonwhite, and the remainder "unknown." Mortality for these patients was compared with that of 41 244 nonsurgical controls (mean age 54.7 years, mean BMI 42, 74% male, and 77% white) from the same 12 Veteran Integrated Services Networks.

In unadjusted analyses, bariatric surgery was significantly associated with reduced mortality (hazard ratio 0.64), but in an analysis of 1694 propensity-matched patients, bariatric surgery was no longer significantly associated with reduced mortality in both unadjusted (hazard ratio 0.83) and time-adjusted (HR 0.94) Cox regressions.

Previous studies have mostly identified control patients via the use of a diagnosis code of morbid obesity, says Maciejewski, which "means they were probably not random samples of all patients eligible for surgery, and they were probably a sicker group [than those who underwent bypass], which might overstate the benefits of surgery."

"Our results highlight the importance of statistical adjustment and careful selection of surgical and nonsurgical cohorts, particularly during evaluation of bariatric surgery according to administrative data," he and his colleagues note. The survival benefits between the bariatric surgery and control groups were modest in most previous studies and so may have been attenuated if adjustment for confounders had been possible, they explain.



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Important to Continue to Track the Patients

Maciejewski says it will be important to continue to track this cohort to see whether any survival advantages for surgery emerge in the longer term.

The fact that no survival advantage has been seen so far is perhaps "not surprising," say he and his colleagues. In the only other trial to have compared bariatric surgery with "high-quality clinical data," the **Swedish Obese Subjects (SOS)** study, the survival benefit was not observed until a median of 13 years of follow-up.

It will also be necessary to incorporate other patients who have undergone more contemporary laparoscopic gastric banding or gastric-sleeve resections--procedures that are being performed more and more in the VA system. "It will be important to update the results to account for those procedures," Maciejewski observes.

But, in the meantime, even though bariatric surgery is not associated with reduced mortality, many patients may still choose to undergo such procedures, "given the strong evidence for significant reductions in body weight and comorbidities and improved quality of life," the researchers conclude.

Maciejewski has received consulting funds from Takeda Pharmaceuticals, Novartis, the Surgical Review Corporation, and the Research and Data Assistance Center at the University of Minnesota and owns stock in Amgen. Disclosures for the coauthors are listed in the paper.