

Study compares gastric bypass procedures in weight loss, complications

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In a study of two of the most commonly performed bariatric surgery procedures, laparoscopic Roux-en-Y gastric bypass (RYGB) resulted in much greater weight loss than adjustable gastric banding (AGB) but had a higher risk of short-term complications and long-term subsequent hospitalizations, according to a report published online by *JAMA Surgery*.

There are tradeoffs between the two surgical approaches in potential risks and benefits. An ongoing debate exists about whether AGB and RYGB can achieve comparable [weight loss](#) with conflicting results in systematic reviews, according to the study background.

Researchers David Arterburn, M.D., M.P.H., of the Group Health Research Institute, Seattle, and colleagues sought to better understand the comparative effectiveness of RYGB vs. AGB on long-term weight loss, as well as the short- and long-term complications of each procedure.

The authors' study included 7,457 [patients](#) from a network of 10 [health care](#) systems in the United States who underwent laparoscopic [bariatric surgery](#) from 2005 through 2009 and were followed-up through 2010. They examined change in body mass index (BMI) and the 30-day rate of major adverse outcomes (death, venous thromboembolism, subsequent intervention and failure to be discharged from the hospital), as well as subsequent hospitalization and intervention.

Study results indicate that the average maximum BMI loss was 8.0 for patients who had AGB and 14.8 for patients who underwent RYGB. A greater proportion of RYGB patients (174 patients, 3 percent) experienced one or more major adverse events by 30 days compared with AGB patients (15 patients, 1.3 percent).

During the entire follow-up of 1,192 AGB patients, two (0.2 percent) died, 148 patients (12.4 percent)

were hospitalized again and 163 patients (13.7 percent) had one or more subsequent interventions. In the group of 5,800 RYGB patients, 17 patients died (0.3 percent), 1,155 patients (19.9 percent) were hospitalized again and 318 patients (5.5 percent) had one or more subsequent interventions.

"We found important differences in short- and long-term health outcomes for the AGB and RYGB procedures across 10 health care systems in the United States. Severely obese patients should be well informed of these differences when they make their decisions about treatment," the authors conclude.

In a related commentary, Justin B. Dimick, M.D., M.P.H., and Jonathan F. Finks, M.D., of the University of Michigan, Ann Arbor, write: "The study by Arterburn et al in this issue of *JAMA Surgery* adds another important perspective to our understanding of the outcomes of bariatric surgery procedures. This study confirms what we know about the perioperative safety: that bypass is higher risk than laparoscopic band placement. However, both procedures have extraordinarily low perioperative event rates (3.0 percent for bypass and 1.3 percent for adjustable gastric banding), especially when compared with other abdominal operations of similar complexity."

"The results of this study also confirm what we know about weight loss, namely, that gastric bypass is about twice as effective in the intermediate term (2-4 years) as the adjustable gastric band," they continue.

"Perhaps the most important contribution of this study lies in the methods and data sources for two important reasons. First, the data used in this study give us a picture of what is happening in the real world – a range of hospitals and practice settings – by linking hospital-billing data to electronic health care records. ... Second, this study demonstrates

the feasibility of using these large, readily available data sets for meaningful comparative effectiveness research," they conclude.

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