

Lap-Band Surgery Often Falls Short in Long Term

BY MARY ANN MOON

FROM ARCHIVES OF SURGERY

The long-term outcomes of laparoscopic adjustable gastric banding appear to be relatively poor, according to a Belgian study.

In a 13-year follow-up study of about half of the obese patients who underwent laparoscopic adjustable gastric banding (LAGB) at one institution between 1994 and 1997, only 43% maintained a loss of excess weight, nearly 60% required reoperation, and obesity-related comorbidities such as diabetes, hypertension, and sleep apnea persisted.

"The high failure rate of LAGB, at least in our hands, could be detrimental to its future continued widespread use as a restrictive weight loss operation," said Dr. Jacques Himpens and his associates at the European School of Laparoscopic Surgery, Saint Pierre University Hospital, Brussels.

In Europe there has been a marked shift in treatment, away from LAGB in favor of gastric bypass. "In contrast, in the United States, an opposite trend has been noted," even though some experts contend that LAGB "can result in a mediocre quality of life and a significant number of complications, and ... there is a tendency for patients to regain weight after some years," the investigators noted.

Dr. Himpens and his colleagues performed what they described as the first study of outcomes beyond the 10-year mark in patients who underwent LAGB using the perigastric technique. (The

VITALS **Major Finding:** Only 43% of patients maintained a "modest" weight loss after LAGB over the long term, and nearly 60% required reoperation.

Data Source: A 13-year follow-up study of 82 patients who underwent LAGB using the perigastric technique during 1994-1997.

Disclosures: Dr. Himpens is a consultant with Ethicon Endosurgery and Covidien, and his associates reported ties to Storz.

more recent "pars flaccida" technique and the current use of wider, softer bands than those used in the late 1990s may be improving outcomes, but that has not yet been proven, and many surgeons continue to use the perigastric technique, the researchers said.)

During the study period, 151 patients underwent LAGB using the perigastric technique at the hospital, but only 82 were available for a follow-up in 2009. "LAGB patients lost to follow-up are likely to experience very little weight loss. Our results must be viewed from this perspective," the authors noted.

The 82 study subjects included 74 women and 8 men, with a mean body mass index of 42 kg/m² (range 35-57), and a mean age of 50 years (range 28-73 years) at baseline.

Fifty patients (59%) developed complications, including 33 major ones such as pouch dilation, band erosion, and band infection. Incisional hernia, port-tubing disconnection, and port infection were considered minor complications.

It is noteworthy that most band ero-

sions and pouch dilations developed "quite late," at a mean of 4 years after surgery, the authors wrote (*Arch. Surg.* 2011 March 21 [doi:10.1001/archsurg.2011.45]).

About 60% of patients required at least one reoperation, because of complications or because they failed to lose weight or regained their weight.

Complete weight loss data were available for 70 patients. The mean percentage of excess weight loss was 43% in this group (range 24%-143%).

Overall, weight loss was modest. In the 70 patients, mean weight fell from 114 kg to 93 kg, and mean BMI decreased from 42 to 34. At follow-up, pa-

tient weight ranged from 37 to 165 kg, and BMI ranged from 35 to 57.

Hypertension, type 2 diabetes, and sleep apnea persisted or developed anew in 30%, 7%, and 8% of the participants, respectively.

Fourteen patients who switched to gastric bypass surgery after failure of LAGB showed better success with that procedure.

Despite these relatively poor outcomes with LAGB, 47 patients said that they were "pleased" or "very pleased" with the procedure, and their scores on quality-of-life measures were the same as those in a nonsurgical population. This may explain why the public has not yet rejected "lap-band" surgery, wrote the authors. ■

Pass These Results On to Patients

VIEW ON THE NEWS **“T**he data in this study, as well as the experience in our own institutions, should influence our choice of procedure [LAGB vs. laparoscopic Roux-en-Y gastric bypass] and the manner in which we inform our patients of the advantages and disadvantages of each procedure,” said Dr. Clifford W. Deveney.

At long-term follow-up, patients who still had the band in place had lost 48% of their excess weight, and those who had had the band removed had lost 22% of their excess weight. Moreover, the number and

type of obesity-related comorbidities increased over time. “These data do not shed a favorable light on the use of LAGB,” he noted.

CLIFFORD W. DEVENEY, M.D., is in the department of surgery at Oregon Health and Science University, Portland. These remarks were taken from his “invited critique” accompanying Dr. Himpens’ report (*Arch. Surg.* 2011 March 21 [doi:10.1001/archsurg.2011.36]). Dr. Deveney reported no financial disclosures.

Sleep Apnea Implicated in Deaths After Bariatric Surgery

BY M. ALEXANDER OTTO

FROM THE ANNUAL ACADEMIC SURGICAL CONGRESS

HUNTINGTON BEACH, CALIF. – Underrecognized and undertreated obstructive sleep apnea is the most likely cause of unexplained deaths following bariatric surgery, according to results of a small pilot study.

Because of that, continuous positive airway pressure (CPAP) and continuous pulse oximetry monitoring – with alarms to alert nursing staff to hypoxic episodes and rouse oxygen-desaturated patients from sleep – should be included in postoperative care, said Dr. Scott Gallagher, a bariatric surgeon at the University of South Florida, Tampa, where the study was conducted.

In previous work, the researchers found that severe, prolonged, and frequent arterial hypoxemia is common in sleeping bariatric surgery patients. They sought to determine why such patients – who seemed to be doing well after surgery – died

suddenly in their sleep, without pulmonary embolism or any other obvious cause.

In 15 gastric bypass patients monitored for 24 hours after surgery, they found that the av-



CPAP and continuous pulse oximetry monitoring, with alarms, should be included in postop care.

DR. GALLAGHER

erage episode of hypoxemia lasted 21 minutes, and the longest for hours. Blood oxygen saturation fell as low as 60% (*J. Surg. Res.* 2010;159:622-6).

Right-to-left shunt, diminished inspired oxygen partial pressure, and other textbook explanations did not provide a rationale for the hypoxemia. Such causes “did not exist in these patients,” Dr. Gallagher said.

That left either postoperative, narcotic-induced hypoventilation or obstructive sleep apnea

as the most likely explanation. Narcotic pain control is common after bariatric surgery, as is sleep apnea.

Dr. Gallagher and his team measured carbon dioxide partial pressures transcutaneously (PtcCO₂) to gauge hypoventilation in 20 patients (14 female) during the first 24 hours after Roux-en-Y gastric bypass.

Patients also wore blood oxygen saturation (SpO₂) ear-clip sensors.

Their mean body mass index was 54 kg/m², and 15 were diagnosed with obstructive sleep apnea. All were on postoperative narcotics.

As in the previous study, all the patients had multiple episodes of prolonged hypoxemia, with a mean of 191 episodes per patient lasting a mean of 1 minute.

Mean SpO₂ was 94%, and mean minimum SpO₂ was 60%. Patients spent about 5% of their time (75 minutes) with SpO₂

below 88%; hypoxemia lasted longer than 5 minutes in three patients.

All patients also had mild hypercarbia, suggesting mild, chronic hypoventilation.



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DR. HOLUBAR

They had a mean PtcCO₂ of 44 mm Hg and a mean maximum of 56 mm Hg. The maximum PtcCO₂ value recorded in any patient was 75 mm Hg. Heart rates temporarily dropped below 50 bpm in 14 patients.

However, “in no patient could hypoxemia be explained entirely by hypoventilation, and there was no obvious relationship between hypoxemic episodes and [hypoventilation],” said Dr. Krista Haines, a recent Univer-

sity of South Florida graduate now with the University of Nevada, Las Vegas, who presented the findings at the congress.

Dr. Stefan Holubar, a colorectal surgeon and co-moderator of the session, thinks that needs to change.

“The standard of care should include formal obstructive sleep apnea [screening] for all patients undergoing bariatric surgery, or they should all be empirically treated [with CPAP] regardless of whether or not they have the diagnosis,” said Dr. Holubar, of Dartmouth-Hitchcock Medical Center in Lebanon, N.H.

“Although it’s a small pilot study, there are profound implications,” he added.

Dr. Gallagher believes what the team has found thus far is “the tip of the iceberg.”

Dr. Gallagher and Dr. Haines said they have no conflicts of interest. The study received no outside funding. ■