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Weight loss and comorbidities evolution after 15 years of bariatric surgery at the Severo Ochoa Hospital

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Abstract

The long-term results of bariatric surgery are not well studied currently. This work evaluates the long-term results of 22 patients operated between 2007 and 2008, analyzing three different interventions: gastric bypass, gastric band and sleeve gastrectomy. After 15 years, a 14-point decrease in body mass index was observed in average. The prevalence of diabetes, dyslipidemia and obstructive apnea decreased, although the percentage of patients with hypertension and osteoarthritis was higher. 27% of patients reported some degree of reflux or dysphagia. Gastric bypass and sleeve gastrectomy showed the best results in weight loss and patient satisfaction. Gastric band, on the other hand, presented worse results, with less weight loss and a higher number of reinterventions. Overall patient satisfaction with the surgery was high, with a mean score of 8 out of 10, with sleeve gastrectomy patients being the most satisfied. This long-term analysis underlines the efficacy of gastric bypass and sleeve gastrectomy in the treatment of obesity, not only in terms of weight loss but also in the control of comorbidities and patient satisfaction.

Keywords:

- 15 years
- Long term
- Follow up

Introduction

The main objectives of bariatric surgery are weight loss and improvement or resolution of obesity-related comorbidities. It is currently the most effective treatment over diet, exercise, drugs or a combination of these (1) (2). Most studies analyze short- or medium-term results. However, there are fewer studies that analyze results more than 10 years after surgery. The aim of this study is to analyze weight loss, the evolution of obesity-related comorbidities and the satisfaction of patients who underwent surgery 15 years ago in our hospital.

Material and method

The bariatric surgery database has been used to extract the preoperative variables and the type of surgery of the patients operated during 2007 and 2008. Through the clinical history, postoperative complications and early or late reinterventions were recorded. Using a telephone survey and contrasting the data reported with those recorded in the clinical history, the weight and current comorbidities and the follow-up by the endocrinology service were collected. Patients were questioned about symptoms of dysphagia, gastroesophageal reflux, heartburn and dumping. Finally, patients were asked to rate their overall satisfaction with the surgery in relation to their improvement in quality of life between 1 and 10 points.

Results

Of the 29 patients that were operated on, 2 died due to oncologic pathology and 5 were impossible to locate, leaving

22 patients. Of these, 10 underwent gastric bypass, 9 underwent gastric banding and the remaining 3 underwent vertical gastrectomy.

In one of the patients who underwent bypass, the surgery was reversed due to malnutrition. Three patients with gastric banding were reoperated, in one of them the band was removed due to intolerance and in the other two a bypass was performed after removal of the band due to weight regain. Therefore, a total of 18 patients were analyzed.

In general, after 15 years, the mean BMI of the patients analyzed was 14 points lower. Regarding the evolution of comorbidities, patients with diabetes have gone from 17% to 9%, patients with dyslipidemia from 17% to 15% and with obstructive sleep apnea from 48% to 9%. The percentage of patients with hypertension and osteoarthritis, however, increased by 5% and 14%, respectively.

Five patients, 27%, report daily reflux. Of these, two are gastric bypass patients, two are gastric band patients and one is in the vertical gastrectomy group. Among them, one in the bypass group and one in the gastric banding group also reported some degree of dysphagia. Three other patients, one in each group, report dysphagia without associated reflux.

Regarding endocrinology follow-up, globally half of the patients continue to be periodically evaluated in office. Analyzing this point by groups, we found that 2 patients in the bypass group, 4 in the gastric banding group and the 3 in the vertical gastrectomy group are being followed up.

The average overall satisfaction in relation to the improvement in their quality of life as a result of surgery is 8 over 10 points.

Analyzing the patients treated by bypass, if we exclude the patient who required reversal of the anatomy due to malnutrition, at 15 years the mean BMI is 15.7 points lower, the mean percentage of excess weight lost is 59.4% and the mean satisfaction is 8.9 out of 10.

Of the 9 patients who underwent gastric banding, the 3 who underwent reoperation were excluded from the analysis. At 15 years the mean BMI is 7.7 points lower, the mean percentage of excess weight lost is 36% and overall satisfaction is 6.8 points.

Analyzing the 3 patients who underwent vertical gastrectomy, the mean BMI is 12.7 points lower, the mean percentage of excess weight lost is 48.5% and the mean satisfaction is 9.3.

These results are shown in Table 1.

	BMI difference	Mean % of EWL	Satisfaction
Gastric bypass	15.7 (5.8)	59.4% (22)	8.9 (0.8)
Gastric Band	7.7 (4.5)	36% (24)	6.8 (2.7)
Sleeve gastrectomy	12.7 (1.6)	48.5 (7.2)	9.3 (1.2)

EWL: excess weight loss

Table 1

Discussion

The long-term efficacy of bariatric surgery is still unknown. Different studies point to weight regain especially after 5 years of surgery (3) both in vertical gastrectomy and in gastric bypass and other metabolic surgeries.

Taking this into account, it is important to know whether, despite this tendency to regain weight, the control of comorbidities is affected and whether patients are satisfied with the treatment.

In the patients studied in our analysis, an acceptable long-term weight loss is maintained, especially in the patients who underwent bypass and vertical gastrectomy, being worse in the gastric banding group. This coincides with the results of the literature (4).

In general, the control of important comorbidities is adequate, especially considering that age is a clear risk factor for the development of hypertension, dyslipidemia and diabetes and that the study was done 15 years after surgery.

Patients who have undergone vertical gastrectomy are the most satisfied with the surgery performed. This is probably due to the fact that combined with a significant weight loss they are patients with less need for dietary supplements and that in our sample they are the group of patients with the highest follow-up by the endocrinology service. In addition, in general, they are patients with fewer metabolic comorbidities, so that a theoretical worse control of these comorbidities in relation to bypass is not so important. This differs from the results of other studies which state that patients who undergo gastric bypass have a higher degree of satisfaction due to greater overall efficacy in relation to weight loss and control of comorbidities (5).

Conclusions

The analysis at 15 years after bariatric surgery in our center shows good results in terms of weight loss, especially in

patients who underwent gastric bypass and vertical gastrectomy. Furthermore, in this group of patients there has only been one reoperation for problems derived from surgery.

The results of gastric banding are worse, with less weight loss and greater need for reinterventions due to failure or problems related to surgery.

Overall, the evolution of obesity-related comorbidities was good, with a decrease in patients with diabetes, dyslipidemia or sleep apnea syndrome.

As for the perception of the treatment and its influence on quality of life, the patients who underwent vertical gastrectomy were the most satisfied, followed by the bypass group and finally the gastric banding group.

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