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Follow-up of Lap-Band® Complications

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Background: Proximal gastric pouch dilation (PGPD) and band dislocation (BD) are the most frequent complications of laparoscopic adjustable silicone gastric banding (LASGB).

Methods: Conservative treatment of PGPD and BD was attempted in all patients by deflation of the band. In the case of failure, laparoscopic exploration was performed.

Results: From January 1996 to July 1998, 8 of 40 patients who underwent LASGB experienced PGPD (n = 7) or BD (n = 1). Debanding was performed in 3 patients with PGPD, while in 4 the pouch dilation was successfully treated with deflation of the band. Two patients (PGPD and BD) were treated with band repositioning. Weight loss was not influenced in patients treated conservatively, compared with patients who did not experience complications.

Conclusions: PGPD and BD are not always responsible for band failure in LASGB. Conservative treatment can be successful, and repositioning of the band is feasible in selected cases.

Key words: Morbid obesity, laparoscopy, gastric banding, device, complication, conservative treatment.

Introduction

Laparoscopic adjustable silicone gastric banding (LASGB) is a minimally invasive procedure for treatment of morbid obesity, with optimal results in terms of morbidity, mortality, and weight loss in patients who do not experience band complications.[1] Band complications, in fact, are the only causes of failure following this procedure, and they often require reintervention while the patient is under general anesthesia. The complications are essentially proximal gastric pouch dilation (PGPD) and/or band dislocation (BD), the mechanisms of which are not always clear.[2] The aim of this study was to evaluate the management, results, and follow-up of conservative and operative treatment of patients who underwent LASGB complicated by PGPD and/or BD.

Patients and Methods

Experience with LASGB started at "Federico II" University of Naples, Italy, in January 1996. The operation was performed with the patients under general anesthesia, with closed CO_2 pneumoperitoneum, and patients in lithotomy and reverse Trendelenburg (30° to 45°) position. Five trocars (Endopath, Ethicon Endosurgery) were used in all procedures. The surgical details have been described and reported elsewere.[2,3] The gastric pouch was initially calibrated at 20 mL (5 patients) and later at 15 mL. The Lap-Band® (McGhan Medical Srl) was fixed with three nonabsorbable stitches on the anterior gastric wall and was inflated only after 3 months. Complications of PGPD and BD were diagnosed on the basis of vomiting and radiographic evidence of stoma obstruction and dilation of the proximal gastric pouch compartment. Radiologic studies were performed by oral esophagogastric transit. Conservative treatment with band deflation was attempted in all patients, and, in cases of failure, laparoscopic exploration was performed. Reoperation was done with the patient under general anesthesia, and previous access trocars were used to re-establish pneumoperitoneum in only one case. Reoperations were always performed laparoscopically. For the benefit of this article, band repositioning is defined as rebanding.

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Table 1. Treatment of proximal gastric pouch dilation and band dislocation* following LASGB

PT	Age/sex	Postop. days/months	Treatment
1	34/F	7 months	de-banding
2	50/F	7 days	medical
		8 months	deflation
		14 months	de-banding
3	45/F	20 months	de-banding
4	44/F	20 months	deflation
5	17/F	11 months	deflation
		13 months	deflation
6*	19/F	4 days	re-banding
7	22/F	14 months	deflation
8	48/F	5 months	deflation
		8 months	re-banding

*BD as initial event.

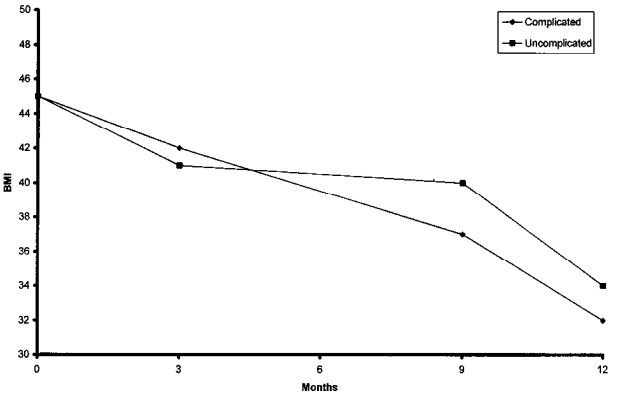

Figure 1. Mean weight loss with and without complications.

Results

From January 1996 to July 1998, 40 patients (36 female, 4 male; mean age 34.4 ± 11.1 years [range 17–59]; mean BMI 44.7 ± 5.8 kg/m^2 [range 35.8–58.2]) underwent LASGB. Eight of them (20%) experienced at least one band complication: PGPD (n = 7; 17.5%) and BD (n = 1; 2.5%). Data of these patients are given in Table 1. Debanding was performed in 3 patients with PGPD (37.5%) at the beginning of our experience. In 1 of these patients (Patient 2), debanding was performed following conservative medical treatment and deflation 7 days and 8 months after the initial operation. The BMI of this patient decreased from 46.1 to 29 kg/m^2. The PGPD was successfully treated band deflation in 4 (57.2%) patients. One of these patients (Patient 8) has undergone laparoscopic exploration and rebanding.

Band dislocation was experienced in 1 patient (Patient 6), who underwent exploration and rebanding 4 days after surgery. Her BMI has decreased from 58.2 to 48.1 at 6 months follow-up. The comparison of the mean weight loss between patients with complications (PGPD + BD) and without complications was not significantly different at follow-up (Figure 1). Laparoscopic re-exploration in 5 (12.5%) patients did not carry postoperative morbidity. Patients were discharged after 48 hours.

Discussion

The LASGB procedure carries a high morbidity because of band complications.[2,4] In our series, the first attempt has always been conservative treatment by band deflation, followed by radiologic esophagogastric transit, nasogastric tube insertion, and parenteral nutrition. Pouch dilation in some patients is also responsible for band dislocation. Radiologic pouch monitoring 7 days after deflation is diagnostic of either improvement toward resolution or irreversible pouch dilation and dislocation. Band dislocation is rare, and usually is an early event in the postoperative period in patients with a noninflated band. Conservative treatment of this complication is not feasible, and re-exploration is always indicated. Early deflation at the beginning of symptoms with the radiologic appearance of transit through the band, with a small proximal pouch, may have a favorable course with nonoperative treatment. For those unfortunate patients requiring reoperations, rebanding is a very good option, without risk of conversion and/or postoperative complications.

In conclusion, follow-up of patients experiencing band complications, maintaining a functioning prosthesis (either by deflation and conservative treatment or by reoperation and rebanding) is very interesting. In terms of weight loss, there is not a significant difference between patients with band complications and those without. Further studies are required for better comprehension and prevention of band complications.

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