

Laparoscopic Conversion of VBG's

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Learning Objectives

- 1) Complications of VBG's
- 2) Treatment of complications
- 3) Long term results of restrictive procedures

Vertical banded gastroplasty (VBG)

Vertical Banded Gastroplasty is a purely non adjustable restrictive procedure and recently performed laparoscopically (1, 2). In this procedure the upper stomach near the oesophagus is stapled vertically for about 2-1/2 inches (6 cm) to create a smaller stomach pouch. The outlet from the pouch is restricted by a band or ring that slows the emptying of the food and thus creates the feeling of fullness. Moreover, MacLean and colleagues published staple line perforations in 48% of patients, and 36% underwent reoperation (3). Preliminary experiences are encouraging (2) but the long term results of VBG are disappointing when assessed by the standard criteria. (4)

VBG was the standard procedure in restrictive bariatric surgery over decades. The aim of this study was to assess the effect of laparoscopic treatment of complications linked to VBG with a focus on Adjustable Gastric Banding (AGB).

Complications of VBG

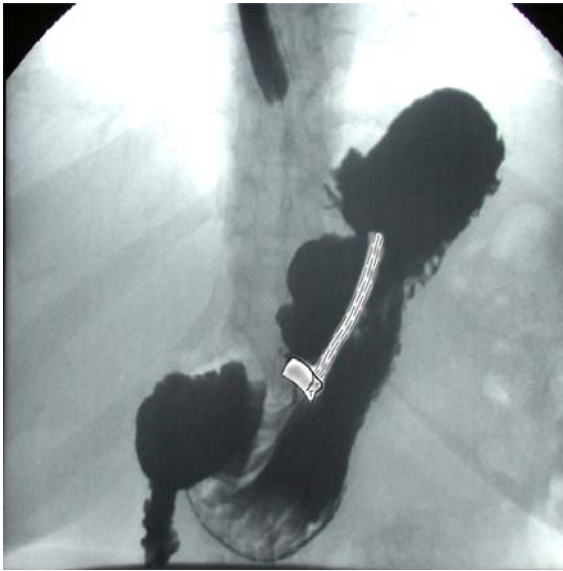







Figure 1 Staple line disruption



*Figure 2 Stoma Stenosis,
Pouch dilatation*

In a prospective study the outcome of patients with a laparoscopic reoperation after VBG were analyzed. All reoperations from September 1999 onward were planned laparoscopically. Patients with an initial weight loss over 50% EWL and a B.A.R.O.S. score (5) over 1 point were considered for an AGB and included into the study.

Figure 3 BAROS (Bariatric Analysis and Reporting Outcome System)

WEIGHT LOSS % OF EXCESS (points)	MEDICAL CONDITIONS (points)	QUALITY OF LIFE QUESTIONNAIRE
Weight gain (-1)	Aggravated (-1)	1. SELF-ESTEEM 
0-24 (0)	Unchanged (0)	2. PHYSICAL 
25-49 (1)	Improved (1)	3. SOCIAL 
50-74 (2)	One major resolved Others improved (2)	4. LABOR 
75-100 (3)	All major resolved Others Improved (3)	5. SEXUAL 
Subtotal:	Subtotal:	Subtotal:

COMPLICATIONS

Minor: Deduct 0.2 point
Major: Deduct 1 point

REOPERATION

Deduct 1 point

Between September 1999 and October 2003 we operated 84 patients after failed open VBG. All reoperations were planned laparoscopically. Twenty four of the 84 patients (28%) had multiple laparotomies. Indications for reoperations were: Thirty two Patients (38%) with outlet stenoses and recurrent vomiting and 52 patients with staple line disruption (62 %). The mean BMI prior treatment was $46,9 \pm 6,1 \text{ kg/m}^2$. The mean BMI decreased statistically significant until the complication occurred $32 \pm 5,1 \text{ kg/m}^2$. We noted 3 perioperative non fatal complications (3,5%, 1 pulmonary embolism, 1 esophagogastric perforation with intraoperative repair, 1 pneumonia) and no mortality, respectively. We had no conversion to open surgery. In one patient a banding procedure was not feasible and abandoned. The mean duration of operation time was 75 ± 14 minutes and the hospital stay was $4,2 \pm 1,3$ / range 2-10 days. The mean follow-up was $21 \pm 14,5$ months with a current follow up rate of 98%. The mean BMI at follow-up was $30,6 \pm 5,1$ (63% EWL from initial weight).

The treatment of complications after VBG with a laparoscopic adjustable gastric banding is safe and effective. Failed VBG with an initial good to excellent BAROS result should be considered again for a restrictive procedure, namely the adjustable gastric banding procedure.

References

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