

TREATMENT OF SEVERE OBESITY WITH ADJUSTABLE GASTRIC BAND. ANALYSIS OF 1350 CASES - 5-YEAR RESULTS

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BACKGROUND

The aim of this study was to determine the long-term results of LAGB in a series of 1350 patients with high follow-up rate, all operated by one surgeon.

METHODS

Between April 2004 and March 2009, 1350 patients have undergone LAGB in a single center using the Helioscopie band (Heliogast® HAGE). The pars-flaccida technique was used and close follow-up was achieved in 98.5% of patients. Complication rate and weight loss have been prospectively recorded.

RESULTS

The mean age of patients was 37 years(range 15-70), mean weight 129 kgs(range 87-265) and mean BMI 45(range 31-75).

A family-relationship among patients was observed in 16% of them.
In 8 cases, 3 members of the same family underwent gastric band placement.
In 49% of the cases the relationship was between a parent and a child, in 36% between brothers or sisters and in 15% between husband and wife. 30% of family-related patients chose to have the operation together and this was most frequently seen between husband and wife.
The mean duration of procedure was 63 mins.(range 50-120 min)

In 78 cases(6%) gastric band placement was combined with a 2nd procedure (Table 1)

The mean hospital stay was 24 hrs, 3% of patients were discharged home the same day.

In 6 patients(0.4%) a small stromal tumor was found incidentally. All the tumors were excised laparoscopically and their mean size was 0.6 cm (range 0.7-0.5 cm). The histology showed longitudinal fusiform cells with no evidence of mitoses, atypia or necrosis. Immunohistochemically all the tumors were positive for CD117(c-kit) and were considered to have benign behavior.

COMPLICATIONS: There was 1 mortality(0.07%) from massive pulmonary embolism 22 days postoperatively. During the follow-up period 5 more patients died from other causes:

1. Acute pulmonary oedema 3 months postoperatively,
2. Massive pulmonary embolism 7 months postoperatively,
3. Accident at work 3 months postoperatively,
4. Pancreatic neoplasm 3 years postoperatively,
5. Testicular neoplasm 2.5 years postoperatively

EARLY COMPLICATIONS:

Early complications were found in 4 patients(2 cases of bleeding, 2 cases of stoma obstruction). All 4 cases required reoperation.

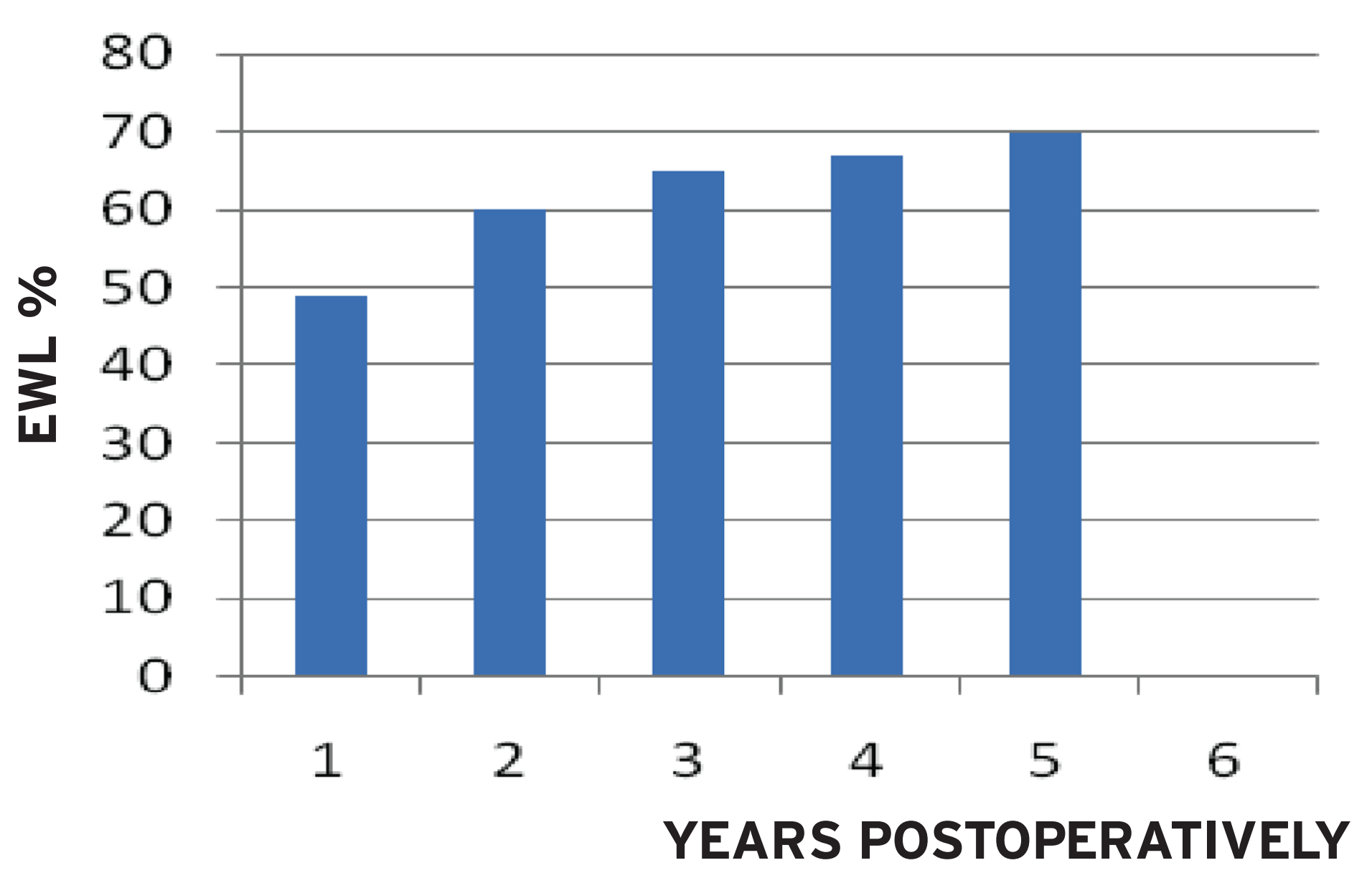
LATE COMPLICATIONS:

slippage or pouch dilatation in 42 patients(3%), the band was repositioned in 40 patients and taken out in 2 cases
erosion 13(1%), the band was taken out endoscopically in 11 cases and laparoscopically in 2, in 3 cases the band was repositioned
band infection in 3 patients(0.2%), the band was removed laparoscopically
leakage from the band in 1 patient(0.07%), the band was repositioned

Table 1. Gastric band combined with a 2nd procedure

Gastric banding & cholecystectomy	23
Gastric banding combined with abdominoplasty	20
Gastric banding & umbilical hernia repair	16
Gastric banding & hiatal hernia repair	12
Gastric banding & ovarian cyst removal	2
Gastric banding & large lipoma excision	1
Gastric banding & hysterectomy for fibroids	1
Gastric banding & vaginal polyp excision	1
Gastric banding & salivary stone removal	1
Gastric banding & nasal polyp excision	1

Mean excess weight loss



49% (±20)	1 year postoperatively
60% (± 21)	2 years postoperatively
65% (±22)	3 years postoperatively
67% (±22)	4 years postoperatively
70% (±22)	5 years postoperatively

Better results were found in patients who visited the clinic regularly (table 2) and In the group of patients with BMI 31-39. (table 3 & 4)

Table 2

At 6 months, %EWL in the group of patients who were asked to attend the clinic at least once a month regardless of weight loss or earlier in case of any concern was 50% and in patients who did not attend the clinic regularly was 29.2% .
At 12 months, %EWL was 68% and 36.4% respectively. In the group of patients who did not attend the clinic regularly, the most common reasons for not attending the clinic were disappointment due to initial poor results, geographical distance and satisfactory weight loss.

Table 3. Patients with BMK<35(113 patients)

Female / Male ratio	8/1
Mean age	38±10
Mean weight	94±10
Mean BMI	33.2±1.3
Comorbidities	35%
Mean % EWL at 1 year	69.3±25
Mean % EWL at 2 years	77.5±24
Mean % EWL at 3 years	79±20

complications

explantation	3
slippage	2
erosion	2
leakage	1

Table 4. Patients with BMI 35-39 and no comorbidities (94 patients)

Female / Male ratio	3/1
Mean age	32
Mean weight	109
Mean BMI	37.5±1
Comorbidities	0%
Mean % EWL at 1 year	63.5±16
Mean % EWL at 2 years	77.7±16
Mean % EWL at 3 years	81±15

complications

slippage	1

Resolution of comorbidities was seen in the majority of patients. The most common comorbidities were Hypertension (11%), diabetes (8%), fatty liver (4%), hyperlipidemia (3%), gastroesophageal reflux disease (3%), sleep apnea (3%),osteoarthritis (3%) polycystic ovaries disease(2%), metabolic syndrome(2%), venous insufficiency(1%)

Resolution was seen in 100% of patients having fatty liver disease(US finding), 100% with sleep apnea(CPAP device not required), 100% with reflux disease(PPIs not required), 75% with diabetes (anti-diabetic tbs were discontinued), 66% with hyperlipidemia(medical treatment was discontinued) 63% with hypertension(medical treatment was discontinued).

Improvement was seen in 100% of patients with polycystic ovary dis.(regular periods), 100% of patients with osteoarthritis, 100% of patients with vein insufficiency 25% of patients with diabetes , 23% of patients with hypertension, 17% of patients with hyperlipidemia

In patients with a complete 2-year follow-up, failure(<25% EWL, lost to follow-up, band explanted) rate was 7%. (Table 5)

Table 5. Patients with failure

patients lost to follow-up(most of them moved to another place)	16
patients with <25% EWL 2 years postoperatively	14
patients with gastric erosion who did not wish to have the band repositioned	10
the band was removed either because of intolerance or disappointment for the Result	7
the band was removed after slippage	2
the band removed after band infection	2
the band removed and the patient underwent sleeve gastrectomy	2

Table 6. Patients who underwent plastic reconstruction

Abdominoplasty	53
Breast reduction	25
Thigh lifting	10
Arm lifting	8
Gluteal lifting	3

Totally the band has been removed from 23 patients(1.6%). Sixty-four patients(9% of patients with a 2-year follow-up) underwent plastic surgery (Table 6). In 21 cases a double procedure was performed and in 6 patients a triple procedure.

Pregnancy occurred in 57 women. There was 1 woman with 3 pregnancies reported and in 2 cases a twin pregnancy occurred. In 2 cases miscarriage was reported, in 1 case abruption placentae and in 1 case abortion because of trisomy 21.

CONCLUSION: LAGB is a safe and reversible procedure, offering excellent long-term results for the treatment of severe obesity.