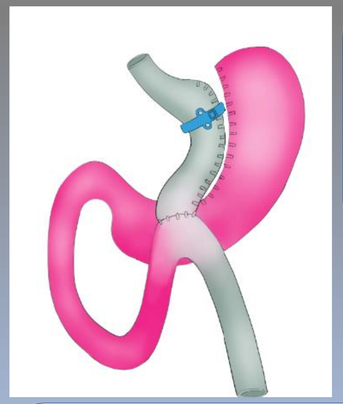


# Banded One anastomosis Gastric Bypass for obese and extreme-obese patients A single institution's experience.

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## Background

Weight loss outcomes after bariatric surgery in patients suffering from extreme obesity are less favorable, with a higher incidence of weight regain. Thus, surgical variation to combat this unwanted outcome have been proposed. One such variation is adding a gastric band to limit the expansion of the newly created pouch.

## Methods:

In this retrospective study, we compared all patients who underwent the BOAGB procedure at the Bariatric Surgery Unit in our Medical Center with a postoperative follow-up of at least one year with patients who underwent a one-anastomosis gastric bypass (OAGB) or sleeve gastrectomy (SG) procedures. Data collected included demographics, comorbidities, surgical outcomes, complications, and postoperative quality-of-life assessments.

## Results:

The pre-op BMI was significantly higher in the BOAGB group compared to the other procedures. Additionally, a higher prevalence of diabetes was observed in the BOAGB group. The duration of surgery was significantly longer for the BOAGB procedure. No significant differences were found in surgical complications. Overall, all procedures resulted in significant excess weight loss (EWL) or change in BMI, improvement in comorbidities, and improved quality of life postoperatively. Demographics and baseline characteristics are presented in Table 1. Tables 2 and 3 present weight and BMI changes, health, and comorbidities by gender, respectively.

**Table 1 - Demographic and Background Disease Data before Index Surgery**

| | BOAGB (n=24) | OAGB (n=43) | SG (n=44) | Sig. |
|---|---|---|---|---|
| Age (years) | 37.9 ± 13.5 | 34.3 ± 10.6 | 35.7 ± 12.5 | 0.505* |
| Gender | | | | |
| Female | 15 (62.5%) | 30 (69.7%) | 27 (61.3%) | |
| Male | 9 (37.5%) | 13 (30.2%) | 17 (38.6%) | 0.688** |
| Preoperative BMI (kg/m$^2$) | 55.4 ± 5.8 | 51.2 ± 3.3 | 51.3 ± 6.8 | 0.006* |
| DM (%) | 8 (33.3%) | 7 (16.2%) | 4 (9.0%) | 0.039** |
| HbA1C (%) | 8.2 ± 2.2 | 7.8 ± 1.7 | 7.8 ± 0.8 | 0.914** |
| HTN (%) | 8 (33%) | 10 (23.2%) | 8 (18.1%) | 0.370** |
| Dyslipidemia (%) | 8 (33%) | 7 (16.2%) | 8 (18.1%) | 0.222** |
| CIHD (%) | 2 (8.3%) | 0 | 2 (4.5%) | 0.135** |

BOAGB = Banded One-Anastomosis Gastric Bypass; OAGB - One-Anastomosis Gastric Bypass; SG - Sleeve Gastrectomy; BMI = Body Mass Index; DM = Diabetes Mellitus; HbA1C = Glycated Hemoglobin; HTN = Hypertension; CIHD = Chronic Ischemic Heart Disease

* One-way ANOVA

** Pearson's Chi square test

**Table 2 - Surgical Data and Postoperative Complications**

| | BOAGB (n=24) | OAGB (n=43) | SG (n=44) | Sig. |
|---|---|---|---|---|
| Procedure time (min) | 71.3 ± 24.1 | 58.5 ± 20.5 | 45.0 ± 29.5 | p<0.001* |
| Length of stay (days) | 2.8 ± 1.1 | 2.9 ± 4.0 | 2.9 ± 1.1 | 0.977* |
| Re-admission within 1 month | 1 (4.1%) | 0 | 2 (4.5%) | 0.376** |
| Emergency Department referrals | 4 (16.6%) | 11 (25.5%) | 5 (11.3%) | 0.643** |

BOAGB = Banded One-Anastomosis Gastric Bypass; OAGB = One-Anastomosis Gastric Bypass; SG = Sleeve Gastrectomy

* One-way ANOVA

** Pearson's Chi square test

**Table 3 - Postoperative Bariatric Data and Changes in Underlying Diseases**

| | BOAGB (n=24) | OAGB (n=43) | SG (n=44) | Sig. |
|---|---|---|---|---|
| EWL% | 65.3 ± 18.4 | 59.4 ± 25.1 | 63.5 ± 20 | 0.515* |
| *Change in BMI (kg/m$^2$)* | *21.9 ± 6.5* | *18.8 ± 6* | *16.7 ± 13.8* | *0.124** |
| QOL (BAROS Score) | 6.5 ± 1.6 | 6.4 ± 2.0 | 6.38 ± 2.3 | 0.962* |
| Patients' satisfaction (1-10) | 8.7 ± 2.1 | 9.1 ± 1.8 | 8.9 ± 2.0 | 0.782* |
| DM improvement | 7/8 (6 recovery) | 7/7 (3 recovery) | 4/4 (3 recovery) | 0.052** |
| HbA1C diff (mg%) | -2.8 ± 2.1 | -2.2 ± 1.8 | -2.5 ± 1.5 | 0.815* |
| HTN improvement | 8/8 (6 recovery) | 10/10 (6 recovery) | 7/8 (1 recovery) | 0.124** |
| Dyslipidemia improvement | 7/8 (6 recovery) | 7/7 (3 recovery) | 8/8 (4 recovery) | 0.022** |
| CIHD improvement | 1/2 | - | 1/2 | 0.458** |

BOAGB = Banded One-Anastomosis Gastric Bypass; OAGB = One-Anastomosis Gastric Bypass; SG = Sleeve Gastrectomy; EWL% = Excess Weight Loss Percentage; QOL = Quality of Life; DM = Diabetes Mellitus; HbA1C = Glycated Hemoglobin; HTN = Hypertension; CIHD = Chronic Ischemic Heart Disease

* One-way ANOVA

** Pearson's Chi square test

## Discussion:

The BOAGB procedure is a relatively new procedure with good bariatric outcomes and a favorable safety profile.
The BOAGB procedure, like OAGB and SG, demonstrated favorable weight loss outcomes and weight maintenance one year postoperatively, without significant differences between the procedures.

## Conclusions:

- ✓ BOAGB is a safe and feasible procedure, with good short-term weight loss.
- ✓ Further studies focusing on BOAGB and comparing to other bariatric surgeries may be able to demonstrate which procedure is better, affecting preoperative decision making.