

## EARLY EXPERIENCE WITH A NOVEL PROCEDURE FOR OBESITY: LAPAROSCOPIC SLEEVE GASTRECTOMY

<sup>1</sup>Department of General Surgery, Singapore General Hospital <sup>2</sup>Department of Endocrinology, Singapore General Hospital, Singapore

Ser Yee Lee<sup>1,2</sup>, Shanker Pasupathy <sup>1</sup>, Kwang Wei Tham<sup>2</sup>, Sonali Ganguly<sup>2</sup>, Wai Keong Wong <sup>1</sup>

**BACKGROUND:** Bariatric surgery offers the morbidly obese substantial and sustainable weight loss and reduction in obesity-related co-morbidities when other conservative treatments have failed. Laparoscopic sleeve gastrectomy is a new restrictive procedure in bariatric surgery.

**AIMS:** To evaluate our experience with laparoscopic sleeve gastrectomy (LSG), a new bariatric surgical procedure, with regards to safety and feasibility of the procedure and early weight loss.

**METHODS:** All patients who underwent LSG were studied in terms of their complications and early clinical results. Patients' clinical data were retrieved from a prospective database.

**RESULTS:** Twenty-three patients underwent laparoscopic sleeve gastrectomy between the period of December 2008 and June 2010 with a mean age of 38 years (Range: 23 - 64). The mean pre-operative weight was 112kg (range 78-170) and body mass index (BMI) 42.1kg/m<sup>2</sup> (33 - 60). Diabetes mellitus was present in 39%, hypertension in 43% and hyperlipidemia in 35% of the patients. Majority of patients had two or more obesity-related co-morbidities (52%). The stomach was tubularised over a 38French calibration tube using endoscopic staplers. Mean operative time was 142 mins (80 - 220). There were no conversions. 1 patient required re-laparoscopy on the 1st post-operative day for bleeding from the gastric staple line. She subsequently recovered well but developed a wound infection from one of the laparoscopic port sites. There were no other morbidities. Median postoperative stay was 3 days (1-9). Mean weight 1, 3 and 6 months post-operatively was 102, 90 and 79kg, a loss of 9, 20 and 30% respectively.

**CONCLUSION:** Laparoscopic sleeve gastrectomy is a promising procedure for surgical treatment of obesity with good early weight loss and low morbidity.

## Introduction of laparoscopic vertical sleeve gastrectomy into bariatric practice

<sup>1</sup>John Flynn Private Hospital <sup>2</sup>Bond University Medical School

William V. Braun<sup>1</sup>, Maree Kekeff<sup>2</sup>, Donna Tanchev<sup>2</sup>, Candice Silverman<sup>1</sup>, Laurent Layani<sup>1</sup>

**Aim:** LVSG has recently become popular as bariatric procedure, not only as first step in high risk or superobese patients or in cases of failed restrictive operations, but mainly as a stand alone operation in morbidly obese. Our aim is to investigate safety, efficacy and consistency of LVSG in both weight loss and remission of patients comorbidities

**Methods:** Retrospective and prospective analysis of all LVSG performed at John Flynn private in Gold Coast from January 2008 until August 2010 was performed. Patients telephone interviews were conducted to establish overall satisfaction with procedure and service

**Results:** 106 LVSG were performed from January 2008 to August 2010. Male to female ratio to 1:1.1. Median age and BMI were 47 (22 to 70), and 52 (35.5 to 81) respectively. 43 procedures were staged operations following failed LGB (40) and open stapling gastroplasty (3). Mean operative time was 79 min (38 to 133 min). There was no mortality. Postoperative complications included gastric leak (1), minor wound infection (4) and prolonged nausea (1). Median LOS was 2 (1 to 61 days). Follow-up was achieved in 97 patients (92%). Mean EWL was 69.1% (23 to 100%) at 6 to 12 months for primary VLSG and 38.5% (16.7 to 76.6) for staged operations. Major comorbidities subsided. 93 (88%) patients provided their feed back over telephone with overall satisfaction rate 100%

**Conclusions:** LVSG is safe and efficacious procedure. It achieves excellent results in weight loss and sustainable short and midterm improvement of overall patients health. Serious complications do however occur and pose high demands on care providers as well as patients and their families

# Comparison Between the Results of Laparoscopic Sleeve Gastrectomy and Laparoscopic Roux-en-Y Gastric Bypass for Morbid Versus Super Morbid Obesity

Yotsuya Medical Cube

Hideharu Shimizu, Yosuke Seki, Eri Kikkawa, Kazuko Sonoda, Tetsuya Nakazato, Kazunori Kasama

## Background

Data on the effectiveness of laparoscopic sleeve gastrectomy (LSG) for super morbid obesity in patients with body mass index (BMI)  $\geq 50$  are scarce. Whether LSG alone can replace laparoscopic Roux-en-Y Gastric Bypass (LRYGB) as a standard bariatric procedure is questionable.

## Methods

For this study, 129 morbidly obese patients who underwent LSG (68 patients) or LRYGB (61 patients) between 2006 and 2009 were retrospectively analyzed. We compared the weight loss effect of LSG to that of LRYGB according to BMI.

## Results

The percentage of excess weight loss (EWL) at the 1-, 3-, 6-, 12-, 24-month follow up points of the patients who underwent LSG and LRYGB were comparable. According to BMI, The percentage of EWL of the patients with an initial BMI  $\leq 35$  in LSG (n=14) and LRYGB (n=11) group at 1-, 3-, 6-, 12-month follow up points were 36.1 and 31.2, 74.2 and 70.8, 78.8 and 99.0, 92.7 and 89.1%, respectively. As for  $35 < \text{BMI} \leq 40$ , the percentage in LSG (n=20) and LRYGB (n=25) group at the same follow up points were 40.7 and 23.7, 50.0 and 47.2, 64.7 and 69.0, 76.9 and 78.3, 83.6 and 85.6%, respectively. As for  $40 < \text{BMI} \leq 50$ , the percentage in LSG (n=20) and LRYGB (n=27) at the same follow up points were 22.6 and 20.4, 43.8 and 40.9, 72.5 and 59.6, 80.5 and 75.2, 72.0 and 80.7%, respectively. There was no significant difference between both groups. However, the percentage of EWL of the patients with  $50 < \text{initial BMI} < 60$  in LSG (n=7) and LRYGB (n=5) group were 14.7 and 20.9 (P=0.21), 27.9 and 35.3 (P=0.14), 36.3 and 56.1% (P=0.04), 35.5 and 69.7% (P=0.01), 32.5 and 60.9% (P=0.02) at 1-, 3-, 6-, 12-, 24-month after operation. Compared with LSG, LRYGB obtained better weight loss outcomes for super morbid obesity ( $50 < \text{BMI} \leq 60$ ).

## Conclusions

LSG can be a standalone procedure for morbidly obese patients with BMI  $< 50$  as well as LRYGB, but LSG is not expected to be performed as a solo procedure for the patients with BMI over 50.

## Early results from a specialized Metabolic and Bariatric Surgery service

<sup>1</sup>Department of General Surgery, Singapore General Hospital <sup>2</sup>Department of Anaesthesia and Surgical Intensive Care, Singapore General Hospital <sup>3</sup>Department of Endocrinology, Singapore General Hospital  
Shanker Pasupathy<sup>1</sup>, Ruban Poopalalingam<sup>2</sup>, Daniel Wai<sup>3</sup>, Kwang Wei Tham<sup>3</sup>

**BACKGROUND:** Bariatric surgery is one of the most effective weight loss interventions for morbidly obese individuals. However, surgery in morbidly obese patients involves potentially significant risk and should be undertaken by specially trained teams. **AIMS OF STUDY:** The experience of a specialised metabolic and bariatric surgery service is described. **METHODS:** In 2008, a dedicated metabolic and bariatric surgery service was set up at the Singapore General Hospital. Patients were managed according to a clinical pathway which included pre-surgical evaluation, surgical admission and post-surgical follow-up. **RESULTS:** From August 2008 to November 2010, 47 patients underwent bariatric surgery. The mean pre-operative weight was 119 kg (range 78- 209) and body mass index (BMI) 44 kg/m<sup>2</sup> (32.5-74). 21 patients had impaired glucose tolerance or type 2 diabetes mellitus. 91% of patients had at least 1 major comorbidity (diabetes mellitus, hypertension, dyslipidaemia, obstructive sleep apnoea) . 37 patients underwent laparoscopic sleeve gastrectomy, 9 laparoscopic gastric bypass and 1 laparoscopic bilio-pancreatic diversion. 3 patients required re-operation for haemorrhage (two) and anastomotic leak (one) on the 1st post-operative day, and then recovered uneventfully. 1 patient with post-operative haemorrhage was managed conservatively with blood transfusion only. There were no mortalities. Median length of stay was 4 days (3-14). The mean absolute weight loss at 6 months was 27% (12-34). **CONCLUSION:** A multi-disciplinary approach improves patient selection and optimization, resulting in improved clinical outcomes after bariatric surgery.

## Laparoscopic Sleeve Gastrectomy with a BIB in situ for 14 months

<sup>1</sup>Al Taie center for laparoscopic and Obesity surgery, Dubai, UAE

Abdulsalam S. Al taie<sup>1</sup>

Introduction: Bioenteric Intra gastric Balloon BIB is used to stay in the stomach for approximately 6 months. its benefit as a sole procedure is questionable. It could be useful if used in a staged procedure as a first step followed by a definitive bariatric surgery for high risk patients. patient and method: In this video am presenting to you a 24 years old gentleman 210 KG with a BMI of 72 who had a BIB in his stomach 14 months prior to our surgery. He had a trial of endoscopic removal of the balloon but was unsuccessful as the balloon was digested. We planned to remove the balloon in a novel technique, along with laparoscopic sleeve gastrectomy (LSG). we started by dividing the omentum on the greater curvature, then dividing the stomach 3 cm from the duodenum along 36 Fr. calibration tube. Approaching the mid stomach after firing the 3rd 60 mm endo cartridge, the balloon deflated and pulled into the resected stomach through a gastrostomy made on that part, LSG completed as usual. then the resected part removed along with the BIB inside. results: the aim is to show a novel technique of removal of BIB that left for long time and was not possible to be taken out endoscopically. He did excellent post operative recovery and was dismissed home on the second post operative day. At the end of year one following the surgery he lost about 75 KGs and his BMI dropped to 46. conclusion: LSG can safely be performed in patients with failed BIB, especially when they are left for longer than 6 months which would be difficult to be removed endoscopically, it can be retrieved in such away that the resected stomach would be used as a retrieval bag for that purpose.

Removal of stomach remnant after laparoscopic sleeve gastrectomy

<sup>1</sup>Luton & Dunstable NHS Foundation Trust, Luton, UK

Kirsty R. Cattle<sup>1</sup>, Periyathambi S. Jambulingam<sup>1</sup>, Ravindra Date<sup>1</sup>

Removal of the remnant stomach after laparoscopic sleeve gastrectomy for obesity can be tricky without enlarging the port site incision. We therefore present a simple technique to facilitate the removal of the remnant stomach which does not involve additional equipment or expense.

## Early Experience with Laparoscopic Roux-en-Y Gastric Bypass for Morbidly Obese patients

<sup>1</sup>Department of General Surgery, Singapore General Hospital, Singapore <sup>2</sup>Department of Endocrinology, Singapore General Hospital, Singapore

CH Lim<sup>1</sup>, S Pasupathy<sup>1</sup>, KW Tham<sup>2</sup>, S Ganguly<sup>2</sup>, WK Wong<sup>1</sup>

**Objective:** To evaluate the early outcome for laparoscopic Roux-en-Y gastric bypass in a new bariatric surgical program in Singapore. **Methods:** A prospective pilot study of 9 patients who underwent laparoscopic Roux-en-Y gastric bypass for obesity by a single surgeon at Singapore General Hospital between September 2008 to October 2010. The study endpoint included operative time, complications and hospital length of stay. At one month post surgery, weight loss and HbA1c levels were recorded. **Results:** Five males and 4 females with median age of 39 years (range 30 to 60) were included in the study. Mean pre-operative weight was 125.5kg (range 74kg to 170.7kg) with a mean pre-operative BMI of 45.9 (range 35.4 to 70). All our patients had diabetes. In addition to diabetes, 8 out of 9 patients had at least one other significant medical co-morbidity related to obesity. The median operative time was 325 minutes (mean of 438 minutes for first 4 cases and 246 minutes for last 4 cases). There was no conversion. One patient required a re-operation for anastomotic leak. Median hospital stay was 4 days (range 1 to 13) and the average weight loss was 13.3% at one month. The median pre-operative HbA1c was 8.6% (range 6.5 to 12.3) and at one month, HbA1c levels reduced to 6.1% (range 5.2 to 8). **Conclusions:** Laparoscopic Roux-en-Y gastric bypass is a technically challenging procedure that can be safely integrated into a bariatric treatment program with early weight loss and improved diabetic control. With more experience, operative time and length of stay decreased.