

## Anesthetic Management of 186 morbidly obese patients for Bariatric Surgery

<sup>1</sup>Minimally Invasive Surgery Center, Yotsuya Medical Cube, Tokyo, Japan <sup>2</sup>Department of Weight Loss Surgery, Yotsuya Medical Cube, Tokyo, Japan

Toshie Shiraishi<sup>1</sup>, Kazuko Sonoda<sup>1</sup>, Eri Kikkawa<sup>2</sup>, Tetsuya Nakazato<sup>2</sup>, Hideharu Shimizu<sup>2</sup>, Yosuke Seki<sup>2</sup>, Yoshimochi Kurokawa<sup>1</sup>, Kazunori Kasama<sup>2</sup>

**Background**We have experience of anesthetizing 186 morbidly obese patients for Bariatric Surgery of which 50 patients had Laparoscopic Roux-en-Y Gastric Bypass (LRYGB), 41 patients had Laparoscopic Sleeve Gastrectomy with Duodenojejunal Bypass (LSG/DJB), 78 patients had Laparoscopic Sleeve Gastrectomy (LSG), and 17 patients had Laparoscopic Gastric Banding (LAGB) between June 2006 and October 2010. We retrospectively evaluated the background of patients, pre-operative complications (such as airway difficulties, intra-operative events, duration of anesthesia and the operation) and some other points. **Result**Mean age and body mass index of the patients were 38 years  $\pm$  10 years and 44 kg/m<sup>2</sup>  $\pm$  9 kg/m<sup>2</sup>. As for pre-operative complications, there were 83 patients (44%) with hypertension, 83 patients (44%) with Diabetes Mellitus, 88 patients (47%) with Sleep Apnea Syndrome (Apnea Hypopnea Index > 20), 26 patients (14%) with asthma, 34 patients (18%) with a mental disorder such as depression. Using the Mallampati Classification (evaluation for difficult laryngoscopy), 29 patients (16%) were class III or IV which predicted difficult laryngoscopy. We performed conscious endotracheal tube intubation on 7 patients (5%). Anesthetic agents used were basically O<sub>2</sub>-Air-Sevoflurane with added propofol, fentanyl, and remifentanyl. During the operations, a severe decrease in SpO<sub>2</sub> or blood pressure and deadly arrhythmias did not occur in any patient. Delayed awakening was also not found and all extubations were performed in the operating room. There was one patient that just after the extubation, experienced a very low level decrease in SpO<sub>2</sub> but recovered immediately. There were no re-intubation patients after the surgery. **Conclusion**There were no anesthetic problems or complications in any patients. There are many important risks or caring points concerning anesthesia for morbidly obese patients, but the biggest issue seems to be the respiratory management. In addition, there are some unclear issues which we should discuss more such as fluid therapy and drug dosing.

## The Role of Proton Pump Inhibitor in Quality of Nursing Care in Sleeve Gastrectomy

<sup>1</sup>E-Da Bariatric & Metabolic International Surgery Center, Taiwan

Li-Chun Lin<sup>1</sup>, Chi-Hsien Lo<sup>1</sup>, Chih-Kun Huang<sup>1</sup>

**Abstract**Background: Recent a few years, laparoscopic sleeve gastrectomy (LSG) is gaining ground as a new option for the treatment of morbid obesity in Asia-Pacific area. But postoperative reflux symptoms bothered the patient and caring nurse. The aim of this study is to evaluate whether proton pump inhibitors (PPI) prior to the surgery can improve the quality of nursing care. Methods: From February 2009 to October of 2010, 34 morbid obese patients underwent laparoscopic sleeve gastrectomy. Preoperatively intravenous PPI was prescribed to 16 patients (group A) and no PPI was given to 18 patients (group B). Both groups were compared in the length of hospital stay, operation time, Visual analogue scale (VAS) pain score and medications frequency (analgesic and anti-emetic). Results: All of 34 patients (15 men and 19 women) underwent laparoscopic sleeve gastrectomy with Fr 38 bougie. No difference of sex, age, comorbidity and BMI was noted in these two groups. Operation time was 53.5 minutes for group A and 59.89 minutes for group B without statistic difference. No differences were found in frequency of morphine injection and VAS pain score in early postoperative and discharge time. Two complications happened, one postoperative bleeding in group A and one staple leakage in group B. The frequency of additional antiemetic use (Prochlorperazine) was higher in group B (38.9% vs. 6.3%) ( $p = 0.025$ ). The length of hospital stay was shorter in group A (3.19 vs. 4.00) ( $p = 0.025$ ). Conclusion: Laparoscopic sleeve gastrectomy is a safe procedure with low morbidity. After surgery, the reflux and vomiting can lead to discomfort, increased use of anti-emetic and prolonged the hospital stay. Preoperative PPI use demonstrated an effective method to contour this problematic and improved the quality of nursing care for sleeve gastrectomy perioperatively.

## Economic evaluation of bariatric surgery

<sup>1</sup>Health management research center, Ritsumeikan Univ., Shiga, Japan <sup>2</sup>Shiga medical univ. <sup>3</sup>Yotsuya medical cube

Hiroaki Kakihara<sup>1</sup>, Hiroshi Yamamoto<sup>2</sup>, Toru Tani<sup>2</sup>, Kazunori Kasama<sup>3</sup>, Tetsuya Nakazato<sup>3</sup>

Purpose: Economic evaluation of bariatric surgery Methods: 31 bariatric surgery patients of Yotsuya Medical Cube, who had follow-up appointments after May 2008, were surveyed. The surveys included questions pertaining to their expenditures before and after their surgeries. Results: The average medical expenditure for preoperative patients is 12,597 yen per month. There were seven patients who reported to have no medical expenditures before their operation. Without them, the average becomes 16,270 yen per month. Post operation, the number of patients who reported to have no medical expenditures increased to 11. The average medical expenditure for postoperative patients was found to be 3,286 yen per month. This means that an average of 9,311 yen decrease per patient, totaling 111,732 yen per year. Furthermore, the social medical cost was decreased by 372,440 yen. In addition, medical related financial expenditures for food, transportation, supplements, entertainment, and utilities decreased. On the other hand, expenditures for items such as clothing, and beauty/hairdressing costs increased. Overall, there was a decrease of 40,546 yen per patient. Analysis: It is thought that the annual medical cost reduction effect lasts and even increases with the age of the patient. If a patient was 30 years old at the time of operation, and it was assumed that they lived to be 80, a medical expenditure decrease of 18,622,000 yen is expected according to the data collected from the survey. This means that the present value after 3% discount from the interest would be 9,870,277 yen. From the patient's point of view, the medical cost (not including what is covered by insurance) is 2,300,000 yen, which could be collected in less than five years (57 months) . It can be said that it is a very advantageous investment of 10 times of long-term national bond interest rate of 2.1% for 20 years.

Measuring our success: how well do we follow our patients?

<sup>1</sup>Australian Institute of Weight Control, Perth, Western Australia

Susan F. Taylor<sup>1</sup>, Jeff M. Hamdorf<sup>1</sup>, Jeremy Tan<sup>1</sup>

The importance of developing protocols for patient care in many fields, including Bariatric Surgery, has been emphasised by many authors. Prospective data collection is essential in a successful clinical service to enable robust self-audit and promote the opportunity to compare clinical services and critically evaluate outcomes against external metrics. As part of the Perth Circle of Care Bariatric program, our surgeons and physicians are committed to thorough and regular follow up. In preparation for protocol improvement, we conducted an audit of our compliance with existing follow up protocols and data entry over three years spanning the introduction of electronic health records. In 2008, before the electronic system was in place, 114 (62%) of 183 postoperative patients were seen within 4 weeks of the six months post operative review point, yet 142 (78%) attended within 4 weeks of the scheduled 12 month review. The new system was implemented at the beginning of 2009, and appointments were more consistently adherent to the followup protocol. In 2010, we have demonstrated continued satisfactory adherence to the 6 month followup protocol. 10% of visits recorded changes in co-morbidities, which reflects our practice of thorough enquiry at initial assessment. This review of our collected data provides opportunity to improve our assessment of the patients at these sentinel reviews.