

Influence of intraoperative hypotension on leakage after sleeve gastrectomy

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Results: Conversion and mortality rate was 0 %. Mean operative time was 110±34 min, mean post-operative hospital stay was 5 days. We reported only one case of transient dysphagia (5.5 %) resolved 40 days after surgery with conservative treatment. No others peri-postoperative complications were registered. After a mean follow up of 10±3 months mean EWL was 58±4.4 %, with comorbidities resolution observed in 70 % of pts and improvement in 23.3 % of these.

Conclusion: These preliminary results confirmed that LSG is a safe option for obese adolescent. The possibility to perform a second stage, the absence of relevant nutritional deficiency, the good results in term of weight loss and comorbidities resolution improved the attractiveness of this choice.

O.195 SPIDER SLEEVE GASTRECTOMY

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Introduction: SPIDER (Single-Port-Instrument-Delivery-Extended-Reach) is a revolutionary surgical platform that offers the triangulation during the surgical procedure eliminating the crossover of the instruments, one of the major limitations of the single access surgery.

Objectives: The purpose of this study was to analyze our initial experience with 19 SPIDER sleeve gastrectomy at the Hospital Prive Casamance between November 2012–December 2013.

Methods: All patients were reviewed in outpatient clinic 1, 3 and 6 months after.

Results: All patients were women with average age of 38.6 (range 23–52). The mean BMI was 39.7 (range 37.2–46.7). The intervention was completed by SPIDER approach in all patients without “conversion” to standard laparoscopy. The mean operative time was 54.2 min (+/SD 14.7 min). The mean BMI at 1 month was 35.5 (+/SD 3.58) with an average EWL of 32.9 % (+/SD 8.56 %). At 3 months the mean BMI was 32.4 (+/SD 2.78) with an average EWL of 52.7 % (+/SD 8.64 %). At 6 months the mean BMI was 29.9 (+/SD 2.60) with an average EWL of 68.8 % (+/SD 8.38 %). Regarding the comorbidities, a complete remission of these was observed in five patients, an improvement in four others and no change in the last patient. The average hospital stay was 3.1 days. The average follow-up period was 247 days (+/SD 71.4 days). There was no mortality and no intraoperative complication was recorded.

Conclusion: The SPIDER-surgical-platform seems feasible and effective as a minimally invasive approach for sleeve gastrectomy allowing easy and efficient operating procedure compared to other systems of single port surgery. Prospective long-term studies are recommended before validating this approach as comparable in terms of efficiency to the conventional laparoscopic surgery.

O.196 RESIDUAL GASTRIC VOLUME AFTER SLEEVE GASTRECTOMY

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Introduction: Sleeve gastrectomy is the most common restrictive procedure performed worldwide for treatment of morbid obese patients. There is no consensus regarding the correlation between the residual gastric volume (RGV) and weight loss failure.

Objectives: The purpose of this study was to use CT-scan-volumetry (CTV) to measure the RGV and to compare the latter parameter to the changes in body weight and BMI reduction in a small group of 20 patients randomly selected.

Methods: The « success » was defined as EWL >50 % (Reinhold criteria) and RGV inferior to 250 cc.

Results: Twenty patients were included in the study with a mean BMI of 42.5 (range 35.9–54.7). The mean gastric volume was 227.3 cc (range 90–445). Eighteen patients achieved an EWL>50 % (16 out 18 patients superior to 70 %) and two patients have had weight loss failure. The mean follow up was 17 months. Seven patients in group A have large gastric tube (radiological failure) with mean RGV of 310.3 cc and EWL of 85.3 %. In group B (13 patients) the RGV was of 182.6 cc for an EWL of 89.6 % which was not statistical different to the group A (*p* value=0.25)

Conclusion: Gastric capacity can increase late after sleeve gastrectomy even after performing a narrow gastric tubulization with no association with weight loss failure at short term follow up. RGV showed no clinical importance in this group, but it can be an useful tool for patients with weight loss failure and to indicate eventual strategy for revisional surgery.

O.197 DOES THE SURGEON'S EXPERIENCE INTERFERE WITH THE LEAK RATE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY ?

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Introduction: Laparoscopic-Sleeve-Gastrectomy (LSG) is becoming a very common bariatric procedure, based on several advantages it carries over more complex bariatric procedures. LSG is generally considered a straightforward procedure, but the surgical technique is one of the major determinants of the most feared complication-staple line leak.

Objectives: The purpose of this study was to analyze the correlation between the surgeon's experience and the leak rate and to assess different risk factors for developing gastric leak after LSG.

Methods: We reviewed a single surgeon's experience since the introduction of LSG (1,700 procedures) performed in La Casamance Private Hospital between September 2005 and February 2014. We compared yearly the leak rate and analyzed for possible risk factors.

Results: Eighteen cases (1.05 %) of gastric leak were recorded. Of these, 17 patients were women (94.4 %) with a mean age of 39.4 years (range 22–61) and mean BMI of 41.2 kg/m² (range 34.8–57.1). On an yearly basis, the leak rate was 2.63 % (2006), 5.66 % (2007), 0 % (2008), 2.55 % (2009), 1.63 % (2010), 0.81 % (2011), 0.3 % (2012), 0.23 % (2013). In group A (the first 850 cases) there were recorded 16 cases of gastric leak, in group B (the last 850 cases–500 cases with GORE-SEAMGUARD-Bioabsorbable Staple Line Reinforcement) two cases of gastric leak. Using Fisher's Exact Test between the two groups, the recorded *p*-value was 0.0011. There was no significant difference for leak rate, which was 0.92 % in the revisional group and 1.09 % in the primary LSG group.

Conclusion: The LSG can be performed safely with a low complication rate. This review of a large series of a single surgeon's experience demonstrated that the leak rate after LSG could be significantly reduced by surgeon's experience.

O.198 INFLUENCE OF INTRAOPERATIVE HYPOTENSION ON LEAKAGE AFTER SLEEVE GASTRECTOMY

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Introduction: A leakage after sleeve gastrectomy (SG) is an important postoperative complication. Reported as risk factors are regional ischemia, increased intraluminal pressure and technical failure of stapling device and/or surgeon.

Objectives: Determine the relation of intraoperative hypotension with a leakage.

Methods: A surgical database contained the outcome of a 7-year cohort of primary SGs. All were performed consistently without specific reinforcement of the staple

line. Abscesses were also regarded as a leakage. An anaesthesiological database contained patient's characteristics and perioperative measurements. The thresholds for mean blood pressure were set for 40–70 mmHg for 15 or 20 min on a continuous episode, likewise for systolic (SBP) for pressure under 70–100 mmHg. Databases were combined using Fisher's exact and Wilcoxon tests.

Results: Thirty-six leakages were identified in a total cohort of 1116 SGs. Episodes of SBP <100 mmHg for 15 min ($p=.027$) and 20 min ($p=.008$) were related to staple line leakage. An episode of mean blood pressure <70 mmHg for 20 min was significantly related to leakage ($p=.014$). A trend was seen when the episode was 15 min ($p=.054$). With lower numbers of cases no significant differences were seen with lower thresholds of both mean and systolic pressure. Other identified risk factors were smoking ($p=.019$), conventional vs fast track ($p=.006$), endo GIA TM vs. TRI-stapler TM ($p=.004$) and duration of surgery ($p=.000$). Taken these factors into account, intraoperative hypotension remained of influence.

Conclusion: Intraoperative hypotension may independently attributes to a leakage after sleeve gastrectomy.

O.199 PREDICTIVE FACTORS OF GLYCEMIC RESPONSE TO LAPAROSCOPIC SLEEVE GASTRECTOMY IN JAPANESE PATIENTS WITH TYPE 2 DIABETES

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Introduction: In Japan, the most popular procedure of bariatric surgery is now laparoscopic sleeve gastrectomy (LSG), and LSG has been covered by the government health insurance since this April. Some literatures demonstrated that the glycemic response to gastric bypass is related to age, BMI, C-peptide, duration of diabetes and weight loss.

Objectives: The aim of this study was to investigate significant factors related to remission of type 2 diabetes after LSG.

Methods: Between 2006 and 2012, 63 Japanese obese patients underwent LSG in our institute. This study enrolled 27 patients with type 2 diabetes who received it more than 6 months ago. LSG was carried out using endoscopic linear staplers from the greater curvature of the antrum 5 cm proximal to the angle of His alongside a 32-Fr endoscope. Remission of diabetes was defined as HbA1c <6.2 % without drug in this study. Statistical analyses were performed using Fisher's exact test.

Results: The remission was achieved in 23 of the patients (85 %) at 6 months. BMI (<35 kg/m²) and diabetes duration (>5 years) were significantly related to failure of remission ($p<0.05$), while age (>40 years), C-peptide (<3 ng/ml), insulin use, weight loss (<30 kg), and %excess weight loss (<40 %) were not associated. Only one of three patients (33 %) with BMI <35 kg/m² and diabetes duration >5 years achieved the remission 6 months after LSG.

Conclusion: The glycemic response to LSG was also related to BMI and diabetes duration, and it may be possible to predict success of type 2 diabetes treatment in the Japanese patients treated by LSG.

O.200 A MULTICENTER REVIEW OF LEAKS AFTER SLEEVE GASTRECTOMY

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Introduction: As the number of sleeve gastrectomies (LSG) increases, surgeons will inevitably encounter more leaks. Management of LSG leaks has evolved over the last several years.

Objectives: To review leaks after LSG to determine the ideal patient-centered treatment algorithm.

Methods: Analysis was performed of all patients who sustained leak after LSG between June 2006 and February 2014 among four bariatric surgery centers. Leak was defined radiographically and ranged from extraluminal air (without extravasation) to frank contrast extravasation.

Results: Leaks occurred in 28 patients (out of 2500 total LSG). Mean preop age and BMI were 38 years and 50 kg/m², respectively. Median time of presentation was 11 days [1–35 d]. 27 (96 %) were primary LSG. Bougie size at time of LSG ranged from 32–40 Fr. The most common intervention was endoscopic stent placement ($n=15$, 54 %). Leak was proximal in 86 % of cases. Contained leaks were managed successfully without stents. Most proximal leaks with contrast extravasation were managed successfully with stents. Average stent duration was 47 days. The vast majority of leaks resolved. One patient required esophagojejunostomy. Mean follow-up was 380 days, with 65.6 % excess weight loss, and minimal symptoms. There was 1 leak-related mortality.

Conclusion: Leaks can be treated successfully with a range of modalities depending on the clinical scenario, ranging from non-operative management to endoscopic stent placement to surgical drainage. Esophagojejunostomy is rarely required. Contained leaks can be successfully managed without stents. Shorter (10 cm) wider (23–25 cm) stents may be more successful than long, narrow stents. Early intervention in leaks with frank contrast extravasation is critical to successful management.

O.201 EFFICACY OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN MILDLY OBESE PATIENTS WITH BODY MASS INDEX OF 30 35 KG/M²

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Introduction: Laparoscopic sleeve gastrectomy (LSG) once was advocated as the first step of a staged operation for super-obese patients. However, it has been gaining rapidly increasing popularity recently as a stand-alone procedure for the treatment of morbid obesity.

Objectives: This study aimed to evaluate the efficacy of LSG in mildly obese patients with a body mass index (BMI) of 30–35 kg/m².

Methods: One hundred ninety-two patients who consecutively underwent LSG between April 2009 and December 2012 were retrospectively reviewed. The patients were classified into lower BMI (30–35 kg/m²) and higher BMI group (>35 kg/m²). Demographics and surgical outcomes were compared between the groups.

Results: Forty-nine patients (25.5 %) belonged to lower BMI group, while the other 143 (74.5 %) to higher BMI group. The preoperative BMI of each group was 32.7 ± 1.6 and 42.6 ± 6.6 kg/m², respectively. Surgical outcomes were similar in both groups, but severe complications requiring invasive intervention developed only in higher BMI group (4/143, 2.8 %). The percent of excess weight loss (%EWL) in lower BMI group was 86.1 % at mean follow-up of 24 months, which was significantly greater than in higher BMI group (61.9 %, $p<0.001$). Serial follow-up showed that %EWL was significantly greater in lower BMI group until 2 years postoperatively, and the difference became statistically insignificant thereafter.

Conclusion: LSG achieved excellent outcomes without severe complication for mildly obese patients. LSG could serve as a safe and effective stand-alone procedure to achieve sustained weight loss and comorbidity resolution in lower BMI population.

O.202 SINGLE-PORT SLEEVE GASTRECTOMY FOR SUPER OBESE PATIENTS

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Introduction: Laparoscopic sleeve gastrectomy has been proposed as a primary bariatric procedure because of the resulting considerable weight loss in super