

P1. ASSESSMENTS OF RELATIONSHIP SATISFACTION AND STABILITY ONE YEAR AFTER WEIGHT LOSS SURGERY (WLS): A PROSPECTIVE STUDY. Katherine L. Applegate, PhD, Kelli E. Friedman, PhD, John P. Grant, MD, Duke University Medical Center, Durham, NC.

Background:

Few studies of marital relationships after WLS exist, with early studies suggesting an increased risk of relationship instability and divorce.

Methods:

We undertook a prospective evaluation of relationship satisfaction, weight-related sexual quality of life, and rate of divorce in 234 consecutive patients before and one year after WLS in a university surgical program. The average excess weight loss at one year was 61%.

Results:

Pre-operatively, 18.4% were never married, 62.4% were currently married, 1.7% were separated, 14.5% were divorced, 0.4% were widowed, and 2.6% were in same-sex relationships. At baseline, BMI, gender, and advancing age were not associated with relationship satisfaction. Moderate impairment in sexual quality of life was reported. The mean baseline relationship satisfaction score, from 0 to 6 with 6 being perfect, was 3.7 +/- 1.3. This rating was not decreased in the 15% of patients undergoing counseling or among the 39% of patients taking psychotropic medication. Higher relationship satisfaction pre-operatively was associated with less depressive symptoms ($p < .05$), less emotional eating ($p < .05$), and less hostility ($p < .05$). One year after surgery, relationship satisfaction (4.1 +/- 1.1; $p < .05$) and weight-related sexual difficulties ($p < .05$) were significantly improved. Most married patients were still married (97%) and only 3% had separated from their spouses. The only divorced patients at follow-up were the four individuals who were separated before surgery.

Conclusion:

This prospective study demonstrates that WLS patients report improvements in relationship satisfaction and weight-related sexual quality of life one year after surgery, while experiencing minimal disruption to their marital relationships.

P2. LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IN THE YOUNG PATIENT: THE CHALLENGE OF SERVING A POPULATION UNDER 21 YEARS OLD. Victor Gonzalez, MD, Daniel E. Swartz, MD, Edward L. Felix, MD, Advanced Bariatric Center, Fresno, CA.

Background:

Although obesity in young patients is on the rise, bariatric surgery in this group remains controversial. The purpose of this study is to evaluate the safety and efficacy of laparoscopic Roux-en-Y gastric bypass (LRYGBP) in patients under 21 years of age.

Methods:

A retrospective study of all patients under 21 years old who underwent LRYGBP between June 1999 and October 2005 was performed. Data included age, weight, BMI, % EWL, complications, comorbidity outcome, and length of follow-up.

Results:

Seventy-eight patients with a mean age of 18 years (15-20), mean weight of 309.2 lbs (217-532) and mean BMI of 49.2 (35-84) had undergone LRYGBP at our center. At one year they achieved a mean weight loss of 112 lbs (66-222), mean BMI of 29.9 + 6.4, and %EWL of 73.8. Long-term EWL was 74.9% (mean follow-up 21 months) but 29% of patients failed to follow-up. There were neither mortalities nor leaks in this series. Major complications included one early bowel obstruction (1.3%) and one late perforated marginal ulcer (1.3%). Minor complications occurred in 22 (28%). When present, resolution of comorbidities included: diabetes (100%), hypertension (100%), esophageal reflux (100%) and sleep apnea (100%).

Conclusion:

Laparoscopic Roux-en-Y Gastric Bypass is a safe and effective means of weight loss in young morbidly obese patients. The 29% failure to follow up in this group suggests that compliance, likely dependent on patient maturity, remains the greatest challenge for the provider.

P3. WALK TEST FOR SUPER OBESE ADOLESCENTS BEFORE AND AFTER BARIATRIC SURGERY. Randal Claytor, PhD, Thomas Inge, MD, PhD, Stephen Daniels, MD, PhD, Children's Hospital Medical Center, Cincinnati, OH

Background:

Little information exists regarding the ability of severely overweight adolescents to tolerate physical activity. This study examined whether a walk test is useful in determining average walking speed and duration of walking bouts in the development of physical activity guidelines post surgery.

Methods:

Pre-surgical education sessions included a walk test. At pre- and 2 weeks post-surgery (13.5 +/- 3.7 days) each individual was asked to

“walk at a self-paced, briskly-paced walk” until volitional fatigue. Testing was done in a climate controlled room with a measured surface. Time and distance to complete a 6-minute walk was recorded along with the time and distance to volitional fatigue.

Results:

Ten adolescents (5 females; 3 African-American males; age = 200.3 +/-14.7 mo.) completed the walking tests.

(Please See Table)

VARIABLE	PRE-SURGERY	POST-SURGERY
Weight (Kg)	188.7 +/- 50.1	181.5 +/- 48.8**
BMI	63.9 +/- 14.4	60.3 +/- 14.5**
6-min. Distance (ft)	1020 +/- 297	1129 +/- 320**
6-min. Speed (mph)	1.88 +/- 0.56	2.11 +/- 0.53*
Vol. Fatigue Distance (ft)	1920 +/- 1041	2157 +/- 1123*
Vol. Fatigue Speed (mph)	1.76 +/- 0.44	1.95 +/- 0.44**
Vol. Fatigue Time (sec)	728.4 +/- 203.4	768.0 +/- 250.0

** p<0.0005; * p<0.03

Additionally, pre-surgical BMI was significantly, negatively correlated with pre-surgery 6-min.Distance (-.767); 6-min. Speed (-.758); Vol. Fatigue Distance (-.782); Vol. Fatigue Speed (-.753); and Vol. Fatigue Time (-.643).

Conclusion:

These data provide us with the basis for making appropriate exercise recommendations for this unique population. These individuals are able to complete 2-4 self-paced walks (1.4 – 2.0 mph) per day for approximately 6-12 minutes per walk. Additionally, these data suggest that modest but rapid improvements in tolerance for exercise occur postoperatively.

P4. THE POSITIVE IMPACT OF SPIRITUAL STRENGTHS ON THE PSYCHOSOCIAL STATUS OF BARIATRIC PATIENTS. Mike Warthen, MDiv, Robert T. Marema, MD, Heidi Cherwony, PsyD, U.S. Bariatric, Ft. Lauderdale, FL.

Background:

Many individuals rely upon their spirituality or identified religious beliefs to cope with challenges and life stressors. In the present study, we utilized the Millon Behavioral Medicine Diagnostic (MBMD) to determine the level of perceived spirituality in a group of bariatric patients.

Methods:

The study population included morbidly obese individuals (BMI = 46.8 + 0.9, age = 42 + 1) who depend upon their spiritual and/or religious beliefs when challenged with stressors, and those who either deny or are unaware of spiritual strengths available to them. Psychosocial profiles of study participants were determined from scores on specific areas of the MBMD and other standardized psychological questionnaires, Minnesota Multiphasic Personality Inventory-2 and Beck Depression Inventory-II.

Results:

The data show that patients with strong spiritual or religious coping behaviors, as compared to those who deal with life stressors through other modes: a) were less likely to abuse drugs and alcohol (p=0.03), b) had significantly fewer feelings of anger and denigration (p=0.02), c) had reduced challenges with depression and emotional instability (p=0.03), and d) were less forceful, oppositional, non-conforming, and guarded (p<0.01). There were no significant differences (p>0.05=N.S.) between the groups with regard to gender, age, weight, age of obesity onset, or marital status.

Conclusion:

The findings suggest that morbidly obese individuals who implement coping strategies related to their spirituality may be better equipped to handle psychosocial challenges associated with their obesity. Attention to the spiritual needs of the morbidly obese may prove to be a beneficial component of the bariatric program.

P5. ROUX-EN-Y GASTRIC BYPASS IN THE MOST SEVERELY OBESE PATIENTS: SAFETY AND EFFICACY IN PATIENTS WEIGHING 400 LBS OR MORE. Edward L. Felix, MD, Victor Gonzalez, MD, Daniel E. Swartz, MD, Advanced Bariatric Centers of California, Fresno, CA.

Background:

Laparoscopic Roux-en-Y gastric bypass (LRYGBP) in patients weighing over 400 lbs may be difficult and pose increased risks causing

surgeons to suggest sleeve gastrectomy or Lap Band as a simpler safer alternative for these patients. The aim of this study was to evaluate the safety and efficacy of LRYGBP in this cohort when performed in an experienced bariatric center.

Methods:

A retrospective review of prospectively collected data on all patients undergoing primary LRYGBP at our center from May, 1999 to November, 2005 was performed. Patients weighing at least 400 lbs were compared to those < 400lbs. with respect to age, BMI, conversion rate, % excess weight loss (EWL), complications and mortality.

Results:

Of 2920 patients undergoing primary RYGBP, 134 (4.5%) weighed at least 400 lbs. with mean weight of 440 lbs (400-602), mean BMI of 64 (48-85), mean age of 39 and 69% were male. Laparoscopy was attempted in 131 of whom 11 (8%) required conversion. There were no 30-day mortalities or pouch leaks but 5 (3.7%) required additional surgery. Of patients followed >1 yr, mean EWL was 61% and 87% lost at least 50% EWL. In contrast, patients weighing < 400 were predominantly female (87%), had a lower conversion rate (2.1% $P<.01$), higher mean EWL 76%, but a 0.14% thirty day mortality.

Conclusion:

Although patients > 400lbs. had a significantly higher conversion rate and lower %EWL, LRYGBP was equally safe and produced significant weight loss in both cohorts. LRYGBP, therefore, should remain the bench mark for even patients over 400 lbs.

P6. PSYCHOLOGICAL CONCERNS FOR MALES SEEKING BARIATRIC SURGERY. Heidi Cherwony, PsyD, Robert T. Marema, MD, Cynthia K. Buffington, PhD, U.S. Bariatric, Ft. Lauderdale, FL

Background:

Society is believed to discriminate less against obese males than females. The purpose of our study was to determine the influence of gender on the psychological status of individuals with the most serious stage of obesity, morbid obesity.

Methods:

The population included 169 morbidly obese (MO) individuals who underwent a psychological evaluation for bariatric surgery candidacy. Psychological status of the study population was assessed by a clinical interview and by scores obtained on the Minnesota Multiphasic Personality Inventory-2, Millon Behavioral Medical Diagnostic, and the Beck Depression Inventory-II.

Results:

While MO male and female study participants did not differ ($p>0.05$) with regard to current age or age of obesity onset, body size was significantly ($p<0.02$) higher among the males. There were also no significant ($p>0.05$) gender differences in life stresses, coping skills, eating behavior, exercise, and social support. However, males, as compared to females scored significantly ($p<0.01$) higher on scales that assess addictive behavior and tendency toward alcoholism. Furthermore, the MO males were more likely to report depression and health problems than females and were more guarded, confrontational, forceful, and pessimistic. In addition, males scored higher on cognitive dysfunction scales and were less spiritual ($p<0.01$). Although males tended to have more psychological issues in association with their obesity than females, the data show that males were more reluctant to seek psychological help.

Conclusion:

MO males present preoperatively with a number of psychological issues for which they are reluctant to seek treatment. These issues need to be recognized and addressed.

P7. OBESITY, PSYCHOLOGICAL TESTING AND SUBSTANCE ABUSE. Edward H. Livingston, MD, UT Southwestern, Dallas, TX.

Background:

The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) is a population representative survey of psychological and substance abuse characteristics of the U.S. population. This survey contains detailed information from standardized psychological tests for 43, 093 individuals of whom 1,159 are morbidly obese. Although it is commonly accepted that there is a relationship between obesity and psychological disorders the ability to demonstrate this on standardized tests has been limited.

Methods:

The NESARC was obtained from the National Institute on Alcohol Abuse and Alcoholism. Body mass indices were calculated from respondent self-reported height and weight information. The prevalence of substance abuse, psychological disorders and SF-12 scores were compared as a function of body size

Results:

Individual domain scores for the SF-12 (physical and mental disability etc.) fell inversely as body weight increased. Personality, Conduct, Antisocial and Obsessive-Compulsive disorder increase with body weight. Substance abuse for alcohol, smoking and marijuana decreased with increasing body weight.

Conclusion:

Psychological disorders increase with obesity whereas substance abuse decreases. These data suggest overeating and substance abuse are very different disorders.

The NESARC database has a substantial repository of detailed psychological information that may facilitate the development of obesity-specific psychological screening instruments for bariatric surgery. From it we should be able to develop an obesity-specific preoperative psychological testing system to predict patient behaviors that may associated with poor outcomes from bariatric surgery.

P8. 5 YEAR EXPERIENCE WITH GASTRIC BYPASS SURGERY AT A MID-PACIFIC COMMUNITY HOSPITAL UTILIZING A PREPAID MEDICAL SERVICE PLAN HMO. Robert A. Frankel, PA-C, Carlos Weber, MD, Mark S. Yamamura, MD, John H. Payne, Jr, MD, Kaiser Foundation Hospital, Honolulu, HI

Background:

3 surgeons and 1 PA performed laparoscopic Roux-en-Y Gastric Bypass surgery on 300 HMO patients who resided in Hawaii from 2001 - 2005. We reviewed outcomes to determine program safety and efficacy.

Methods:

Retrospective case-series analysis was conducted on 342 patients who underwent LRYGBP between May 2000 and September 2005. We weighed patients at orientation, prior to surgery, and compiled the latest post-operative weights. Weight loss was analyzed for 273 patients, all more than 12 months post-op, who were weighed in 2005. We recorded incidence of death, pulmonary embolism (PE), leak, stricture, incomplete division of pouch and gastric remnant, conversion to open procedure, respiratory failure, marginal ulcer, anastomotic bleed and internal hernia.

Results:

Average weight loss was 98 lbs (range 14.4–799 lbs). Mean excess weight loss (EWL) was 58% after at least 1 year post-op (Range 6–138%). Mean EWL was 69% for patients 12-24 months post-op, 62% for patients at 25-36 months, 59% at 37-48 months, and 52% at 49-60 months. There was one early (<30 days) death and one late death. Overall complications occurred in less than 19%: leak 2.2%, internal hernia 2.5%, marginal ulcer 2.5%, incomplete division 1%, PE 1%, stricture 10%. All major complications were in patients BMI >=48 kg/m². Conversion rate was 1-2%. Perioperative complications occurred early in the series. Average OR time and LOS for last 100 cases was 177 minutes and 4 post-op days respectively. OR time and LOS data reveal a declining trend.

Conclusion:

LRYGBP surgery for weight loss is both safe and effective within our program.

P9. LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS FOLLOWING KIDNEY/PANCREAS TRANSPLANTATION. Carol A. McCloskey, MD, Ramesh C. Ramanathan, MD, University of Pittsburgh, Pittsburgh, PA.

Background:

This is a case report of a 47 year-old female 9 years status post kidney/pancreas transplantation for renal failure secondary to Type I diabetes. The organs were functional and the diabetes was in remission. However, the patient was morbidly obese with a body mass index (BMI) of 39.3, and developed hypertension. Her immunosuppressant regimen included tacrolimus (FK506) and imuran.

Methods:

A laparoscopic Roux-en-Y gastric bypass (LRYGBP) was performed. The donor pancreas/duodenum was located in the right lower quadrant and found to be anastomosed to the mid-jejunum, approximately 70cm from the ligament of Treitz. The jejunum was divided 30 cm distal to the pancreas, creating a 100cm biliopancreatic limb. A 70 cm Roux limb was created, and the gastrojejunostomy was performed in an antecolic, antegastric fashion.

Results:

Postoperatively, the patient had a transient elevation in creatinine, peaking at 1.8 on postoperative day (POD)3. This correlated with supra-therapeutic FK506 levels, peaking at 22.6 on POD6. The creatinine normalized following dose reduction.. At her one-month follow-up visit, she had a 27lb. weight loss. Her creatinine was 1.1, and her FK506 level was normal (5.3).

Conclusion:

LRYGBP is a feasible operation following pancreas transplantation. This presents a technical challenge in locating the donor organ, preventing its injury, and in constructing the Roux limb. FK506 levels must be monitored to prevent perioperative toxicity. Also, the drug levels could be affected by significant weight loss and potential alteration in absorption of the drug.

P10. LAPAROSCOPIC GASTRIC BYPASS IN PATIENTS OVER 65 YEARS OF AGE. Jorge L. Sosa, MD, Hector Pallavicini, MD, Hector Pombo, MD, Nancy Rubio, CST, Palmetto General Hospital, Hialeah, FL.

Background:

The Medicare Coverage Advisory Committee found insufficient evidence in patients over 65 years of age to recommend coverage for

bariatric surgery, and requested additional data be developed and provided. In order to add to the data available in these patients we analyzed our results with laparoscopic gastric bypass in patients older than 65 years.

Methods:

We analyzed our prospective database collected on all gastric bypass patients for mortality, morbidity and results in patients older than 65 years. We determined in-hospital, 30 day and total mortality to date, as well as 30 day morbidity. We determined % excess weight loss, average drop in BMI, and resolution of co-morbidities.

Results:

There were 27 patients older than 65 years, the average age was 67.5 years (65-75). The pre-operative average BMI was 48 (36-59). Average follow-up was 16 months (6-31). In-hospital mortality was 0%. One patient died of pulmonary embolism at one month post op for a 30 day mortality of 4% (1/27). Total mortality to date is 4% (1/27). The average drop in BMI was 14 (6-28). Excess weight loss averaged 66.6% (22-100%). Resolution of co-morbidities: Diabetes 50%; Hypertension 47%; Sleep apnea 100%; Dyslipidemia 75%. A further 21% of diabetic patients were able to eliminate insulin use.

Conclusion:

In patients older than 65 years, laparoscopic gastric bypass has an acceptable risk/benefit ratio and should be offered to well selected, motivated patients. As the obesity epidemic affects our increasingly older population, it is a viable tool in the management of morbid obesity and its associated co-morbidities.

P11. ARE OLDER BARIATRIC PATIENTS AT INCREASED RISK FOR MICRONUTRIENT DEFICIENCIES?. RoseMarie Toussaint, MD, Robert T. Marema, MD, Cynthia K. Buffington, PhD, U.S. Bariatric, Ft. Lauderdale, FL.

Background:

The risk for deficiencies in B-complex vitamins, such as vitamin B12 and folic acid, decrease with advancing age. As gastric bypass (GBP) can lead to deficiencies in these vitamins, older gastric bypass patients have an increased risk for deficiencies in these and possibly other micronutrients. In our study, we have examined the association between age and postoperative micronutrients in GBP patients.

Methods:

The study population included 3 age groups (G) of post-surgical gastric bypass patients, G1 = ages 20-35 years, G2 = 36-50, G3 = 51-75. All patients were similar with regard to body size, gender distribution, and time of post-surgical blood nutrient assessment. Nutrients measured included blood levels of B12, folic acid, ferritin, iron, and calcium.

Results:

Micronutrient levels of the older G3 patients were consistently and significantly ($p < 0.05$) higher than those of the youngest G1 patients for vitamin B12, folic acid, and ferritin. Regression analyses show that age was positively, rather than inversely, correlated to vitamin B12 ($p = 0.03$), folic acid ($p = 0.0006$), ferritin ($p = 0.003$) and iron ($p = 0.05$). The higher micronutrients of the older vs. younger patients were not due to differences in weight loss, as % excess weight loss did not significantly differ between the age groups at the time samples were analyzed for micronutrients. However, the older bariatric patients were more compliant in taking their nutrient supplements than were patients of G1 (chi square < 0.05).

Conclusion:

Age is not a significant determinant of post-surgical vitamin and mineral deficiencies with GBP surgery, particularly for patients taking nutrient supplements.

P12. GASTRIC BANDING FOR MORBIDLY OBESE ADOLESCENTS. Eliezer Avinoach, MD, Leonid Lansdberg, MD, Solly Mizrahi, MD, Surgery A, Soroka Medical Center, Ben Gurion University, Faculty of Health Sciences, Beer Sheva, Israel.

Background:

Although bariatric surgery is an effective treatment for morbid obesity there is relative little experience with the surgical treatment for the morbidly obese adolescent. This study describes our long-term clinical experience with the laparoscopic gastric banding in adolescents.

Methods:

During the last six years 116 morbidly obese patients had laparoscopic gastric banding. Their mean age was 16 ± 1.4 (range - 9 to 18) years. Despite their young age, their mean height was 165 ± 7 cm their mean weight was 119 ± 15 kg with a mean BMI of 43 ± 3 . Fourteen patients (12%) were super-obese, BMI over 50. They had laparoscopic gastric banding performed through the *pars flaccida*, with no gastro-gastric sutures. Mean operation time was 25 minutes and hospital stay did not exceed 24 hours.

Results:

Perioperative complication rate was $< 1\%$. Late complications included band slippage in six (4.4%) patients who underwent laparoscopic reposition. Close follow-up is essential during the first year in order to inflate the band. Monthly inflation was performed and seven to eight milliliters was used to maintain weight reduction. Three to six years after surgery the mean BMI was 29 ± 2.5 (32

patients). Two years after surgery the BMI was 28±3.2 (49 patients). The super-obese reduced their BMI to 32±4. There were no metabolic or nutritional disorders.

Conclusion:

We found that, despite their young age, obese adolescents had similar dimensions as obese adults. We conclude that gastric banding is well tolerated by young morbidly obese patients. It induces long-term significant weight reduction with a significant improvement in the quality of life .

P13. AFTER GASTRIC BYPASS SURGERY, PATIENTS OVER 50 REPORT HIGHER QUALITY OF LIFE THAN THOSE YOUNGER. Stephanie F Yeager, RD, Christopher D Still, DO,FACN,FA, Peter Benotti, MD, FACS, Anthony Petrick, MD, FACS, William Strodel, MD,FACS, Shawn Yoder, Craig Wood, Geisinger Medical Center, Danville, PA.

Background:

Many studies indicate improvements in quality of life (QOL) in patients who have lost weight after gastric bypass surgery (GBP). However, few studies examine changes in QOL within specific subgroups of this population, such as patient age. Our retrospective study explored differences in QOL scores between patients older than 50 years of age then younger patients.

Methods:

Impact of Weight Questionnaires (IWQOL-Lite; Duke University Medical Center© 2000) were administered to 117 patients undergoing GBP (38 older than 50, 79 younger than 50). Parameters included physical function, sexual life, public distress, work, self-esteem, and overall QOL. Patients completed their assessment and results for each category were compared to their individual post-GBP data, and a paired t-test was used to calculate p-values.

Results:

In all age groups total QOL scores as well as all indices of QOL improved. Significantly, mean change improved more in the perceptions of patients older than 50 years of age (p<0. 0001) when compared to those younger in the categories of Physical Function: 50.7% vs. 43%; Self Esteem: 39.2% vs. 32.8%, Work: 34.2 % vs. 22.5%, and Total QOL 41.2 % vs. 34.6 %

Conclusion:

These early results suggest improvements in perceptions of overall QOL following gastric bypass surgery in patients older than 50 when compared with patients younger than 50, and specifically in categories of improved physical function, self-esteem and work. This topic deserves further empirical investigation.

P14. BARIATRIC SURGERY IN PATIENTS 60 YEARS OLD AND OLDER. Peter T Hallowell, MD, Thomas A. Stellato, MD, Cathleen J. Crouse, RN, Margaret M. Schuster, RN, Kristen N. Graf, RN, Ann V. Robinson, John J. Jasper, MD, University Hospitals of Cleveland, Cleveland, OH.

Background:

The success of bariatric surgery in the treatment of morbid obesity and co-morbid conditions has spurred surgeons and patients to seek this therapy in groups outside the 1991 NIH consensus conference recommendations. Results have varied in patients over age 55. A recent review of the Medicare database revealed results that were less than expected. We report our experience in patients 60 years and older.

Methods:

We reviewed our prospectively maintained database of 868 consecutive patients. 837 Patients were identified as having a primary RNY gastric bypass. 43 patients in this group were 60 or older. They were compared to 794 < 60.

Results:

We identified 43 pts. 60 years old or older (range 60 – 66) and 794 pts less than 60 (range 18-59). Demographic data is listed below:

Table1

	60 & over (n=43)	Under 60 (n=794)	Significance
Age	61.7	42.5	
M/F	12 % / 88%	13% / 87%	NS
BMI	49.8	50.5	NS
OR time (min)	145	165	0.02
Length of stay (days)	2.95	3.26	NS

Values for Age, BMI, OR time, and LOS are mean

Postoperative complications are listed in the table below:

Table2

	60 & over (n=43)	Under 60 (n=794)	Significance
PE	4.6% (2)	1.1% (9)	NS

Leak	0	1.5% (12)	NS
Fistula	2.3%(1)	1.1% (9)	NS
Bleeding	0	1.9%(16)	NS
Pneumonia	2.3%(1)	0.8%(7)	NS
Bowel obstruction w/in 30 Days	2.3%(1)	0.7%(6)	NS
Death	0	0.4%(3)	NS

*Fishers exact test

Conclusion:

Bariatric surgery can be performed in patients age 60 and over with acceptable morbidity and mortality. In our series major complication rates are comparable between those 60 and over and those under. We believe these results reflect careful patient selection and intensive preoperative education and evaluation. Our results indicate bariatric surgery should not be denied based on age.

P15. SAFETY OF BARIATRIC SURGERY IN PATIENTS 65 YEARS OF AGE AND OLDER. Huy Trieu, MD, Samuel Szomstein, MD, Raul J. Rosenthal, MD, Cleveland Clinic Florida, Weston, FL.

Background:

Advanced age is considered a relative contraindication to bariatric surgery. Given the increase in life expectancy and the morbidity associated with aging, the potential health benefits of bariatric surgery for the elderly should be reconsidered. This study aims to investigate the safety of bariatric procedures in patients 65 years of age and older.

Methods:

A retrospective review of 1500 patients who underwent bariatric surgery between February 2000 and October 2005 was performed. Seventy-five patients 65 years of age and older were evaluated. The procedures performed included laparoscopic Roux-en-Y gastric bypass, gastric banding, and sleeve gastrectomy. The rate of perioperative complications, mortality, and length of hospital stay were assessed.

Results:

There was no mortality in this series. One patient (1.3%) developed rapid atrial fibrillation, requiring termination of the operation. Two patients (2.7%) developed perioperative atrial fibrillation, which resolved spontaneously. There was one (1.3%) postoperative leak. One patient (1.3%) had an esophageal perforation requiring reoperation. Ten patients (13.3%) had anastomotic strictures and/or ulcers. One patient (1.3%) had a gastrointestinal bleed, which resolved spontaneously. The average length of hospital stay was 3.8 days. Two patients had extended hospital stays, 13 and 28 days, for esophageal perforation and postoperative leak, respectively.

Conclusion:

This study demonstrated that laparoscopic bariatric surgery for elderly patients age 65 years and older is safe. Morbidity and mortality rates in these patients are comparable to the rates seen in the published literature of younger populations.

P16. FINDINGS FROM THE PRE-OPERATIVE QUESTIONNAIRE, THE HAWAII EXPERIENCE. Robert A. Frankel, PA-C, Candyce Kaaia, CSAC, Carlos Weber, MD, Kaiser Foundation Hospital, Honolulu, HI.

Background:

A thorough questionnaire was filled out by every patient seeking bariatric surgery. Pilot study of questionnaire results revealed positive responses in several fields related to post-traumatic stress. Other elements confirm relationships between morbid obesity and reduced QOL among patients, described elsewhere in the literature.

Methods:

We surveyed health, self-esteem, ability to work, exercise, relationships, and the prevalence of behavioral treatment and medications; history of either physical, verbal or sexual child abuse; rape, abuse or threat as an adolescent or adult; parent of abused child, or perpetrator of battery on a family member, current weight status, (i.e. gaining, losing, or maintaining.) Results were tabulated and compared. Demographic information was limited to age, gender, ethnicity and BMI.

Results:

8 randomly selected questionnaires were reviewed. Female: 87.5%; Caucasian 62.5%, Hawaiian 25%, Filipino 12.5%; mean age 43; mean BMI 43.1. CAGE scores were unanimously negative. Positive results: Child Abuse Victim 37.5%, Molestation 50%, Rape 25%, Adolescent or adult abuse 25%; been battered 37.5%, battered another 25%; parent of abused child 12.5%, life insurance rejection 12.5%, anger problems 25%, sleep problems 75%, Sadness or depression 62.5%, nervousness or anxiety 25%, memory problems 25%. Morbid obesity affected: health 87.5%, self esteem 87.5%, work 62.5%, relationships 75%, exercise 87.5%, sexuality 50%. 25% of patients were enrolled in talk therapy and 37.5% received medicine.

Conclusion:

Our pilot study suggests confirmation of the relationships between post-traumatic stress and morbid obesity. In turn, our survey reaffirms how morbid obesity affects behavioral health. Full pool results will be presented at the conference.

P17. COMPARATIVE OUTCOMES OF LAPAROSCOPIC AND OPEN NEPHRECTOMY IN OBESE AND NON-OBESE PATIENTS. Marc Zerey, MD, Amy E Lincourt, PhD, Dimitrios Stefanidis, MD, B. Lauren Paton, MD, Catherine W. Sechrist, BS, Timothy S. Kuwada, MD, B. Todd Heniford, MD, Kent W. Kercher, MD, Carolinas Medical Center, Charlotte, NC.

Background:

The prevalence of obesity has increased in the past two decades. We studied the effects of obesity on the outcomes of patients undergoing nephrectomy.

Methods:

A single-institution review of 347 patients undergoing donor, simple, radical, and partial nephrectomy from 1998 to 2005 was performed from a prospective database of 450 patients. Patients were grouped according to BMI as non-obese ($\leq 30 \text{ kg/m}^2$) or obese ($>30 \text{ kg/m}^2$). Data obtained included demographics, perioperative data, length of stay (LOS), complications, and mortality. Standard statistical methods were used to determine significance ($P < 0.05$).

Results:

One hundred and one patients (29.1%) were classified as obese. There were no statistically significant differences in baseline characteristics of the two groups and 78.8% of nephrectomies were performed laparoscopically. Obese patients constituted 78/262 (42.4%) of laparoscopic nephrectomies versus 24/87 (27.6%) in the open group. For both operative approaches, mean EBL and operative time were significantly higher in obese patients compared with the non-obese (EBL: 137.3mL versus 114.3mL; $P=0.0076$; operating time: 202.5min versus 181.5min; $P=0.0065$). There were no mortalities and no statistically significant differences in intraoperative (7.9% vs 4.1%; $P=0.1516$) or postoperative complications (14.3% vs 13.3%; $P=0.8121$), including wound infection (3.0% vs. 2.8%; $P=0.9436$), and LOS (4.4days vs 4.7days; $P=0.5525$). The conversion rate was 1.3% in the obese group and 0.5% in the non-obese ($P=0.5355$).

Conclusion:

Despite slightly longer operative times and EBL, laparoscopic nephrectomy is beneficial in patients with a BMI $>30 \text{ kg/m}^2$ and associated with similar short-term outcome to patients with a BMI $\leq 30 \text{ kg/m}^2$.

Outcomes	Laparoscopic	Open	P-value
Estimated blood loss	107.6 ± 94.7mL	239.0 ± 176.7mL	< 0.001
Intraoperative complications	3/78 (3.8%)	5/23 (21.7%)	0.005
Postoperative complications	7/78 (9.0%)	7/23 (30.4%)	0.009
Wound infection	1/78 (1.3%)	2/23 (8.7%)	NS
Length of stay	4.0 ± 1.4 days	5.7 ± 1.4 days	< 0.001

Table 1: Comparison of outcomes for obese patients undergoing laparoscopic or open nephrectomy

P18. A PROSPECTIVE STUDY TO EVALUATE THE SAFETY AND EFFICACY OF LAP-BAND® ADJUSTABLE GASTRIC BAND (LAGB®) OPERATIONS FOR PATIENTS WITH BMI BETWEEN 30-40 KG/M²: PRELIMINARY RESULTS. Christine J Ren, MD, George Fielding, MD, Allison Youn, New York University, New York, NY.

Background:

These are preliminary results of a 5-year prospective single center trial (FDA-IDE Number G030190) determining outcomes after LAGB® Adjustable Gastric Band (LAGB) for patients with BMI between 30-40kg/m².

Methods:

Prospective data collected from 37 patients operated on from April 2004 to October 2005 included weight loss, changes in co-morbidity and complications.

Results:

The majority of patients were female (97.3%) and Caucasian (98%) with average BMI of 34.8kg/m² and average age of 38.15 years (SD 13.12). Median follow up was 6 months (range 1-12 months). BMI fell to 28.3 and 25.1kg/m² at 6 and 12 months and mean excess weight loss at 6 months (n=16) and 12 months (n=6) was 48% and 72% respectively.

There were no deaths and 30 and 90-day morbidity was zero. Delayed complications included 1 band slip (2.7%), 1 port leak (2.7%) and 2 food obstructions (5.4%) requiring endoscopic bolus removal.

Co-morbid conditions at initial visit: 26 dyslipidemia, 15 DM or IGT, 15 Back pain, 14 HTN, 14 OA, 12 GERD, 7 Obstructive Sleep Apnea, 6 Depression, 3 Asthma, 2 PCOS, 1 NASH, 1 Migraine and 1 Urinary Stress Incontinence (total 122). Total co-morbid

conditions decreased to 39 at 6 months and 20 at 12 months. These were supported by improvements in clinical and laboratory values and decreases in medications taken.

Conclusion:

Patients with BMI 30-40kg/m² can safely undergo LAGB surgery with an extremely low complication rate, excellent weight loss and significant improvement of obesity related illnesses. Long-term follow up will be continued to determine the durability of these outcomes.

P19. ROUX EN Y GASTRIC BYPASS IN PATIENTS WEIGHING OVER 500 POUNDS. Christopher L Bell, MD, Nancy Puzifferri, MD, John H. Rogers, MPH, Elizabeth C Hamilton, MD, David A. Provost, MD, University of Texas Southwestern Medical Center, Dallas, TX.

Background:

Outcomes after weight loss operations in patients over 500 pounds are not well described. Previous studies suggest this population may be at increased morbidity and mortality risk, and less likely to achieve optimal weight loss. The purpose of our study was to evaluate outcomes in patients over 500 pounds (227 kg) after Roux-en-Y gastric bypass (RYGBP).

Methods:

We reviewed a prospectively collected database and identified 41 patients weighing over 500 pounds who underwent RYGBP over an 8-year period. Patients were followed for a mean of 45 months (range, 2-96). Peri-operative and long-term complications, weight loss, and resolution of obesity related co-morbidities were determined.

Results:

The mean weight was 584 pounds (265 kg, range 227-375 kg), with a mean BMI of 86 kg/m² (64-115). The mean age of the patients was 39 years (range, 23-61 years). Follow-up was complete in 73% (30/41) patients. Mean excess weight loss was 44% at one year, 54% at two years, 61% at three years, 65% at four years, and 58% at > five years. Eighty-eight percent of reported co-morbidities improved postoperatively. Three patients (7%) experienced major in-hospital perioperative complications: anastomotic leak, respiratory insufficiency, and pulmonary embolism. Nineteen percent experienced late complications: incisional hernia (6 patients), cholelithiasis (1), anastomotic stricture (3), and GI bleed (1). There was one out-patient mortality 31 days post-operatively, presumably from pulmonary embolism.

Conclusion:

Gastric bypass may be performed safely in patients weighing over 500 pounds. Successful weight loss and significant reduction in obesity related co-morbidities are achieved.

P20. OMENTAL NECROSIS AS A CAUSE OF ACUTE ABDOMINAL PAIN AFTER ANTECOLIC GASTRIC BYPASS. Ramsey M. Dallal, MD, FACS, Albert Einstein Medical Center, Philadelphia, PA.

Background: The antecolic approach to the laparoscopic Roux en Y gastric bypass (LRYGBP) has been demonstrated to decrease the incidence of internal herniation. However, specific complications of this approach have not been documented.

Methods: Outcomes of 201 consecutive patients who had antecolic LRYGBP by a single surgeon over 24 months were prospectively evaluated for complications.

Results: Of the 201 LRYGBP patients, three (1.5%) developed complications attributable to omental division. All three had identical presentation of acute, localized left sided pain without significant signs of systemic illness. All patients developed acute symptoms on post-operative day 3. Laparoscopic re-exploration on post-operative day 3, 4 and 4 demonstrated partial omental necrosis without other pathology. All patients had immediate relief of symptoms and had no further complications. Age, sex, BMI nor co-morbidities were predictive of this complication.

Conclusions: Partial omental necrosis is a complication of omental transection while performing the antecolic approach to the LRYGBP. Omental necrosis should be part of the differential diagnosis, including anastomotic leak, in patients who develop abdominal pain 3-4 days after LRYGBP.

P21. SUPER-SUPER OBESE PATIENTS CAN SAFELY AND EFFECTIVELY UNDERGO LAPAROSCOPIC BARIATRIC SURGERY. Dennis Hong, MD, MSc, Jay Jan, MD, Emma Patterson, MD, Legacy Health System, Portland, OR.

Background:

Surgery is the best treatment for morbid obesity. There is little data on outcomes in the super-super obese patients (BMI > 60 kg/m²).

The objective was to determine the safety and effectiveness of laparoscopic gastric bypass (RNY) and adjustable gastric banding (AGB) in this patient population.

Methods:

At our institution, 852 patients have undergone laparoscopic bariatric surgery since 2000. Sixty-three patients, classified as super-super obese in our database, were included in the study. Outcomes reviewed included complications, days hospitalized and weight loss.

Results:

Twenty-eight and 35 super-super obese patients underwent a laparoscopic RNY and laparoscopic AGB respectively. Mean BMI (kg/m²) of patients undergoing RNY was 64 and 67.8 for AGB. Mean operative times were 144.9 minutes for laparoscopic RNY and 89.5 minutes for AGB. Mean hospitalizations were 2.3 days for RNY and 1.6 days for AGB. Mean % excess weight loss for patients undergoing laparoscopic RNY and AGB respectively, were: 3 months – 27% and 13%, 6 months – 37.7 and 16.7, 9 months – 47.7 and 27.1, 1 year – 48.8 and 30.1, 18 months – 46.5 and 35.5 and 2 year – 60.1 and 37.3. There was no 30-day mortality.

Conclusion:

Laparoscopic bariatric surgery can be performed safely in the super-super obese patient. Acceptable weight loss can be achieved in this patient population.

P22. ENDOSCOPIC THERAPY FOR SEVERE GASTROESOPHAGEAL REFLUX DISEASE AFTER DUODENAL SWITCH. Nahid Hamoui, MD, Peter F. Crookes, MD, University of Southern California, Los Angeles, CA.

Background:

The biliopancreatic diversion/duodenal switch (BPD/DS) operation involves resection of 80% of the acid bearing mucosa of the stomach and total diversion of bile and pancreatic secretions. Despite this, some patients develop troublesome symptoms of gastroesophageal reflux (GER) postoperatively. Little is known about treatment of GER in this group of patients, especially those who are refractory to medical therapy, as fundoplication is no longer possible. We present a series of patients in whom endoscopic management of this problem was attempted.

Methods:

Case Report

Results:

Four patients (3F:1M) presented with severe reflux after BPD/DS. Ages ranged from 43 to 50 and BMI from 35 to 56. Three of the four were symptomatic preoperatively, and two of these patients were on PPIs prior to BPD/DS. All 4 patients were treated with PPIs postoperatively, but despite this continued to have erosive esophagitis and markedly increased esophageal acid exposure on 24 hour pH monitoring. Three patients were treated with Stretta® and one with Enteryx®. Symptomatic improvement was minimal, and no patient was able to discontinue PPI therapy. One patient has required excision of the distal stomach with proximal gastrojejunostomy.

Conclusion:

GER after DS/BPD represents a difficult problem. Although endoscopic treatments such as Stretta® and Enteryx® are potentially attractive options in this group of patients, they appear to be ineffective. In patients who remain severely symptomatic a proximal gastrojejunostomy with removal of the distal stomach can be performed. Caution should be exercised in performing the DS/BPD in patients with established GERD.

P23. LEARNING CURVE FOR LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IN AN ACADEMIC FELLOWSHIP PROGRAM. Parag Bhanot, MD, Alex P. Nagle, MD, Jay B. Prystowsky, MD, Northwestern University Feinberg School of Medicine, Chicago, IL.

Background:

Laparoscopic bariatric surgery is an integral component of minimally invasive surgery fellowships. The purpose of this study was to examine the learning curve for laparoscopic Roux-en-Y gastric bypass (LRYGBP) in a fellowship program.

Methods:

Information was prospectively obtained for patients who underwent LRYGBP from 2003 to 2005 at a single institution. The first 80 consecutive cases for each of two fellows were reviewed. Patients were divided into four groups of 20 consecutive cases for each fellow. Operative time was the primary outcome. Secondary outcomes included conversions, estimated blood loss (EBL), length of stay (LOS), leaks, and deaths. Statistical analysis was accomplished using Chi-square and ANOVA.

Results:

The BMI ranged from 40 to 72 with a mean of 47. Operative times for Groups 1 to 4 were 161+66, 135+33, 116+20, and 121+26

minutes, respectively (P <0.05). There were 4 conversions (2.5%), all in group 1. One postoperative leak (0.6%) and no deaths occurred. EBL and LOS were not significantly different between groups.

Conclusion:

LRYGBP is a technically demanding procedure with a defined learning curve. Based on operative time, we observed a learning curve of approximately 40 cases. This is reflective of the fellow being the primary surgeon from the initial case. There was no mortality and a low complication rate during the study period, indicating that the procedure can be performed safely even during the fellow's learning curve. These results may be helpful in establishing curricula and accreditation for fellowship programs as well as hospital credentialing guidelines.

P24. CHANGES IN ALCOHOL SENSITIVITY AND EFFECTS WITH GASTRIC BYPASS. Cynthia K. Buffington, PhD, Debbie L. Daley, MS, Mike Warthen, MDiv, Robert T. Marema, MD, U.S. Bariatric, Ft. Lauderdale, FL.

Background:

Gastric bypass (GBP) enhances the rate of alcohol absorption and, in doing so, may increase the risk for alcohol toxicity. In the present study, we queried GBP patients as to their use of, and sensitivity to, alcohol before and after surgery.

Methods:

The survey included questions pertaining to alcohol use, sensitivity and effects. The majority of the 139 anonymous responders were female (75%) and more than two years post-surgery (67%).

Results:

The survey results show that 90% of GBP patients believe they are more sensitive to alcohol since surgery. The majority of patients (63%) with enhanced alcohol sensitivity claim that they feel the effects of alcohol after having only a few sips of their drink. Gender has a significant effect on sensitivity (p=0.008), whereas time out from surgery has no significant influence on alcohol sensitivity or consumption, suggesting that the effect of GBP on alcohol absorption and/or metabolism is not an adaptable condition. In spite of enhanced sensitivity, only 15% of patients drink less than preoperatively, whereas, 14% of patients drink considerably more. Among the responders, 25% admit to loss of muscular control while drinking and the majority of these individuals (76%) claim that their loss of balance and coordination occurred after having only 1-2 drinks. Recovery of muscular function required >2 hours for some patients. A total of five patients in the study population received a DUI, all within the early postoperative period and after only one drink.

Conclusion:

Gastric bypass causes changes in alcohol absorption and/or metabolism that increase alcohol sensitivity and effects.

P25. OBSTRUCTIVE SLEEP APNEA (OSA): SCREENING PRIOR TO POLYSOMNOGRAPHY (PSG). Julie A Welcheck, RN ONC, Dawn M Miller, MA, Karen M Schulz, RN MSN, Helmut Schreiber, MD, FACS, IM Sonpal, MD, FACS, Linda Patterson, MD, FACS, Aviv Ben-Meir, MD, FACS, Joseph Sopko, MD, FCCP, St. Vincent Charity Hospital, Cleveland, OH.

Background:

Preoperative diagnosis of OSA in morbidly obese patients is extremely important, however, "gold-standard" polysomnography (PSG) testing is not always feasible for all patients. In this study, we compared the ability of the Epworth Sleepiness Scale (ESS) to the Short Sleep Apnea Questionnaire (SQ) to accurately identify patients for PSG referral. These results build on our prior study demonstrating that another screening tool, the Cleveland Sleep Habits Survey (CSS), was superior to the ESS in identifying patients needing PSG (Welcheck et al. Jun 2005 ASBS).

Methods:

We reviewed charts for all patients who underwent primary bariatric procedures (open or lap RYGBP or Lap-Band) from Jan 1 to Sep 30, 2005.

Results:

387 patients met inclusion criteria (completed both an ESS and SQ) and 289 were referred for PSG (scored \pm 12 on the ESS and/or scored positively on the SQ; 98 were not referred for PSG because they scored < 12 or not positively on the SQ).

Table 1.

	PSG	SQ	ESS
OSA Positive	236	204 (86.4%)	115 (48.7%)
OSA Negative	53	21 (39.6%)	28 (52.8)
False +		32	25

The SQ correctly identified 86.4% of patients with OSA, while the ESS identified only 48.7% (Table 1). The SQ produced slightly more false positives than the ESS (32 vs. 25).

Conclusion:

The SQ correctly identified nearly twice as many patients with PSG-confirmed OSA than did the ESS; false positives were not substantially different. The SQ is a more accurate screening tool than the ESS for identifying patients who should be referred for PSG prior to bariatric surgery.

P26. VITAMIN D DEFICIENCIES: EFFECTS OF OBESITY AND LOW SUNLIGHT EXPOSURE. Whitney Wilhide, RN, Jackie Smiertka, RN, Robert T. Marema, MD, Cynthia K. Buffington, PhD, U.S. Bariatric, Ft. Lauderdale, FL.

Background:

Vitamin D deficiencies are not uncommon among pre-surgical bariatric patients and are believed to be attributable, in part, to an uptake and sequestering of the vitamin into fat storage depots. The purpose of the present study was to determine the influence of body size on vitamin D levels of two groups of bariatric patients with distinctively different amounts of sunshine exposure.

Methods:

The study population included 69 morbidly obese (MO) male and female bariatric surgical candidates, 36 residing in south Florida and 33 living in northern Michigan. Blood samples for measurement of vitamins were obtained between the months of December through February.

Results:

Vitamin D levels of all study subjects were significantly ($p=0.003$) and inversely correlated to BMI. Vitamin D levels of the Michigan patients were nearly 2-fold below those of the South Floridians, 13.1 ± 2.2 and 23.7 ± 1.7 , respectively, $p=0.001$. Among the Michigan population, 87% had 'below or low normal' Vitamin D values, as compared to 39% of the Florida cohort. Even when differences in BMI of patients were factored into the equation, highly significant geographical differences in levels of the vitamin ($p=0.001$) remained. Vitamin A, another fat-soluble vitamin, did not statistically ($p=0.209$) differ between the patient groups, nor did Vitamin B12 ($p=0.208$)

Conclusion:

Morbid obesity is associated with vitamin D deficiencies that are exacerbated significantly by low sunlight exposure. Geographic location should be taken into consideration when determining supplement needs.

P27. LAPAROSCOPIC SLEEVE GASTRECTOMY: INITIAL RESULTS. Philippe Mognol, MD, Marmuse Jean-Pierre, PhD, Bichat, Paris, France

Background:

To evaluate the outcomes and initial results of laparoscopic sleeve gastrectomy.

Methods:

A retrospective analysis of the initial 11 patients who underwent laparoscopic sleeve gastrectomy was performed. Study end-points included operative time, complication rates, hospital length of stay, time to initiation of oral diet, and percentage of excess weight loss.

Results:

There were 6 women and 5 men with a mean age of 43 years (range 31 to 52). Mean preoperative weight was 182 kg (range 125 kg to 247 kg), with a mean preoperative body mass index of 64 (range 50 to 81). Indication for sleeve gastrectomy was a high BMI in ten and presence of gastric polyp that contraindicates gastric bypass in one. 1 patient had previous restrictive bariatric surgery. Mean operative time was 2 hours (range 1.5 to 2.5). No patient required conversion. There were no postoperative complications nor mortality. Median hospital stay was 8 days. The median number of days to the start of an oral diet was 2 days. Average excess weight loss and BMI at one year were 51% and 17kg/m^2 , respectively.

Conclusion:

Laparoscopic sleeve gastrectomy can be safely integrated into a bariatric treatment program with good results in term of weight loss and quality of life. Laparoscopic sleeve gastrectomy can be a first step procedure before gastric bypass or duodenal switch or a one step restrictive procedure if long term results are good.

P28. SHARED MEDICAL APPOINTMENTS: A NEW CONCEPT FOR HIGH VOLUME FOLLOW-UP FOR BARIATRIC PATIENTS. Orit Kaidar-Person, MD, Emily Wong-Swartz, MS, RD, Michelle Lefkowitz, MS, RD, Karen Conigliaro, RN, Norma Fritz, LPN, Jessica Biren, MS, Cynthia Alexander, PsyD, Samuel Szomstein, MD, Raul Rosenthal, MD, Cleveland Clinic Florida, Weston, FL.

Background:

Shared medical appointments (SMA) is a new model in patient care. This model was designed in order to improve patients' access to their physicians and improve physicians' productivity. The aim of this study was to evaluate patients' satisfaction from SMA following bariatric surgery.

Methods:

The medical records of consecutive patients who were followed up after bariatric surgery were retrospectively reviewed. The type of bariatric surgery and type of medical appointment were recorded, as well as the patients' reply to evaluation questionnaires in the SMA group.

Results:

From April 2004 to December 2004, 277 patients had individual visits; 242 underwent Roux-en-Y gastric bypass (RYGBP) and 35 underwent laparoscopic gastric banding (LGB). A total of 33 SMAs were conducted during that time; 28 patients underwent RYGBP and 5 underwent LGB. Ninety-one percent of patients who had an initial SMA scheduled a subsequent SMA and 96% indicated that they would recommend SMA to others. On a scale of 1 to 5 (1=poor, 5=excellent) patients graded their overall experience with SMA as 4.5. Other parameters in the questionnaire were all ranked between 4 and 5. The average waiting period for an appointment before the implementation of SMA was 57.7(50-65) days for new patients and 50(20-72) days for former patients and after the implementation of SMA 25(8-42) days for new patients (p=0.0046), and 20.3(0-42) days for former patients (p=0.06).

Conclusion:

SMA offers the patient prompt access to medical care, with high satisfaction rates.

P29. RISK STRATIFICATION OF PATIENTS UNDERGOING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (RYGBP): AN ALGORITHM TO MINIMIZE INCIDENCE OF VENOUS THROMBOEMBOLISM (VTE). Aviv Ben-Meir, MD, Leslie Gilbert, MD, Dawn Miller, MA, John Marshall, MD, Karen Schulz, RN, MSN, Helmut Schreiber, MD, Indukumar Sonpal, MD, Linda Patterson, MD, Cleveland Center for Bariatric Surgery, Saint Vincent Charity Hospital, Cleveland, OH.

Background:

Reported VTE rates for laparoscopic RYGBP patients range from 1%-6%. Our program rate of 0.3% was achieved as a result of screening for VTE risk factors and adjusting prophylaxis based on a risk algorithm.

Methods:

We retrospectively reviewed charts for laparoscopic RYGBP procedures between July 2002 and September 2005 (single surgeon, 948 patients) to develop a risk-stratification algorithm for VTE prophylaxis.

Results:

All 948 patients were categorized as low, moderate, or high risk. One of three prophylaxis strategies was used based on potential risk (Table 1).

Table 1. Risk Level and Prophylaxis

Risk	Low	Moderate	High	Total
Prophylaxis	perioperative subcutaneous heparin	10 days low molecular weight heparin	6-weeks Coumadin	
Identified Risk factors	Venous insufficiency	BMI>55, Prior DVT without other risk factors, Family history without other risk factors	Personal history of DVT with other risk factors, Personal history of PE, Family history of VTE with risk factors	
Number	905	17	26	948
Developed VTE	3	0	0	0.3%

No patients in 'moderate' or 'high' risk categories experienced VTE. Three 'low risk' patients developed VTE postoperatively (2-8 days) and were successfully treated with anticoagulation. Post-VTE, all 3 patients reported a strong family history of VTE which would have placed them in the high risk prophylaxis group.

Conclusion:

Bariatric patients have varying levels of VTE risk, therefore prophylaxis should be stratified accordingly. Our prophylaxis algorithm based on preoperative risk has resulted in an extremely low rate of VTE in our series of laparoscopic RYGBP.

P30. DEVELOPMENT OF A MEDICAL WEIGHT MANAGEMENT PROGRAM IN COLLABORATION WITH A BARIATRIC SURGERY CENTER. Judy K. Crouch, NPC, Lori Wightman, MSN, Brian Gluck, DO, MGHP Center for Weight Mgt, Muskegon, MI.

Background:

To fully service the obese population, expansion of our bariatric surgery program to include a medical weight management program was essential. Our initial program included bariatric surgery but lacked a comprehensive medical weight management component. Patients were being denied authorization for bariatric surgery due to lack of participation in a medically supervised weight management program.

Methods:

Monitoring tools, educational materials, and processes were developed to ensure a quality program that meets both National Institute of Health Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity and insurance requirements. Teaching manuals were developed for patient education. All programs utilize the same multidisciplinary team of specialized professionals trained in weight management, including medical directors, nurse practitioners, psychologists, dietitians, and exercise physiologists. Bi-weekly case conferencing for bariatric and medical patients allows communication between all disciplines to develop an individualized plan of care for each patient.

Results:

A three-tiered weight loss program was developed. Our Center for Weight Management now offers laparoscopic bariatric surgery, a 26-week comprehensive multidisciplinary weight management program, and a 12-week third choice for those not meeting criteria for either medical or surgical weight management. Outcomes including BMI, total weight lost, patient satisfaction and quality of life scores, and the improvement or resolution of co-morbidities have been remarkable.

Conclusion:

Linking a medical weight management component to a bariatric surgery program allows access to treatment for a greater number of obese patients seeking care for this disease.

P31. OMENTAL WRAP DECREASES GASTROJEJUNAL ANASTOMOTIC LEAK AFTER LAPAROSCOPIC GASTRIC BYPASS. Paige Teller, MD, Renee S. Wolff, MD, Roy Cobean, MD, Maine Medical Center, Portland, ME.

Background:

Gastrojejunal leak is the most feared complication of Roux-en-Y Gastric Bypass (LRYGBP). Early detection with contrast study and/or clinical evaluation is important to decrease morbidity and mortality. We describe the use of an omental wrap around the gastrojejunal anastomosis as an operative technique to decrease postoperative leak.

Methods:

Retrospective study of 543 patients who underwent LRYGBP from November 1999 to November 2005. All cases were performed laparoscopically by two surgeons at a single institution. Of 543 cases, 407 had a 360 degree wrap using viable omentum anchored to both the pouch and the Roux of a circular stapled anastomosis (OW), and 136 had no wrap (NW). The two groups were comparable in gender (82.5% female), age (44.4 years) and BMI (51.6). Clinically significant leaks were diagnosed radiologically, endoscopically or by direct visualization at re-operation. Postoperative gastrojejunal leak rate was determined for each group.

Results:

There were 6 leaks in the NW group and 2 in the OW group. The NW leaks required immediate re-operative intervention. Of the two leaks in the OW group, one was presumed clinically and the other was diagnosed endoscopically. The former refused intervention and the latter was managed with elective, delayed revision. The gastrojejunal leak rate was 4.4% in the NW group and 0.49% in the OW group ($p < 0.01$).

Conclusion:

Omental wrap is associated with a reduction in gastrojejunal anastomotic leak rate after laparoscopic Roux-en-Y Gastric Bypass.

P32. QUALITY OF LIFE IN DIABETIC PATIENTS IMPROVES LESS THAN NON-DIABETES AFTER GASTRIC BYPASS SURGERY. Stephanie F. Yeager, RD, Christopher D. Still, DO, FACN, FA, Peter Benotti, MD, FACS, Anthony Petrick, MD, FACS, William Strodel, MD, FACS, Craig Wood, Shawn Yoder, Glenn Gerhard, MD, John Gerdes, Ph.D, Geisinger Medical Center, Danville, PA.

Background:

A paucity of studies compare differences in improvements in QOL in diabetic patients with non-diabetic patients' changes following weight reduction through Gastric Bypass Surgery (GBP). Our retrospective study explores this issue.

Methods:

Impact of Weight Questionnaires (IWQOL-Lite; Duke University Medical Center© 2000) were administered to 117 patients undergoing GBP (Non-diabetic: 69; Diabetic: 48) at baseline and seven months following GBP. Average initial BMI of diabetic patients were lower as compared to non-diabetics (45 kg/m² vs. 51 kg/m²). Parameters included physical function, sexual life, public distress, work, self-esteem, and overall QOL. Patients completed their assessments and results for each category were compared to their individual post-GBP data, a paired t-test was used to calculate p-values.

Results:

In both groups total QOL scores as well as all indices of QOL improved significantly post-operatively (p<0.0001). However among patients with diabetes the mean pre-surgery total QOL initial score was significantly higher than non diabetic patients (40% vs. 36%).

Interestingly, mean change improved more in non-diabetic patients (p<0.0001) as compared to patients who had diabetes in the categories of Physical Function: 44 % vs. 40 %; Public Distress: 40.3% vs. 35.3% and Work: 26.2 % vs. 23.1% as well as total QOL: 33% vs. 36%. No significant difference was found between the groups in the Self Esteem and Sexual Life indices.

Conclusion:

These early results suggest more significant changes in overall QOL following gastric bypass surgery in non-diabetic patients compared with diabetic patients; specifically more improved physical function, public distress and work. This topic deserves further empirical investigation.

P33. COMPARISON OF LAPAROSCOPIC LINEAR STAPLING DEVICES IN CLINICAL PRACTICE. Steven C. Simper, MD, FACS, Joanna M. Erzinger, MD, Sherman C. Smith, MD, FACS, Rocky Mountain Associated Physicians, Salt Lake City, UT.

Background:

Only one prior study has studied the safety in clinical practice of the two laparoscopic linear stapling devices currently on the market. In this study, we used laparoscopic gastric bypass as a standard procedure to compare these devices.

Methods:

400 consecutive patients were prospectively studied from Nov. 2003 to Sept. 2004. Group A (200 patients) using the Endo GIA Universal 6 row stapler (USSC). Group B (200 patients) using ETS 6 row stapler (Ethicon). Parameters measured included stapler misfires, staple line bleeding, staple line leaks, unexplained GI bleeding, and unexplained intra abdominal bleeding. Patients were followed for 6 weeks post op to monitor for complications.

Results:

Both groups were similar in preoperative body mass index (BMI), age, and sex. Both groups had a single leak attributed to the staple line (0.5%) p=1.0. There were 3 (0.25% of staple firings) stapler misfires in group B; none resulting in complications post op. No misfires reported in group A (p=0.25). GI bleeding, staple line bleeding, and unexplained intra-abdominal bleeding occurred in 6 pt (3%), 2 pt, (1%), 5 pt (2.5%) group A respectively: 1 pt (0.5%), 0 pt (0%), 2pt (1%) in group B respectively (p=0.12, p=0.5, p=0.45 respectively). Total adverse events 14 pt (7%) group A, 7 pt (3.5%) group B (p=0.18).

Conclusion:

While the ETS 6 row stapler had more misfires, the Endo GIA 6 row stapler had more bleeding complications. Neither difference reached statistical significance. Therefore, in our experience both devices were equally safe and effective.

P34. LAPAROSCOPIC BARIATRIC SURGERY - AN EFFECTIVE TREATMENT FOR OBESITY RELATED DIABETES. Krishna K. Bitra, MBChB, Colm J. O'Boyle, FRCS, Peter C. Sedman, FRCS, Christopher M.S. Royston, FRCS, Patrick Moore, FRCS, Hull Royal Infirmary, Hull, East UK.

Background:

To compare efficacy of Laparoscopic Gastric Banding (LGB) and Laparoscopic Roux-en-Y-Bypass (LRYGBP) for the treatment of diabetes in morbidly obese patients.

Methods:

A retrospective analysis of all morbidly obese patients with diabetes mellitus undergoing laparoscopic bariatric intervention at a single sub-specialist centre.

Results:

Between June 2001 and July 2005, 41 morbidly obese diabetic patients underwent laparoscopic bariatric surgical interventions. 42% (16) underwent LRYGP and 58%(22) underwent LGB. Three patients (7%) were lost to follow up. The median age (range) was 45 (22-72) years. The median postoperative follow up was 21 (2-27) months. The median preoperative BMI was 50 (35-72) kg/m². The median postoperative BMI was 39 (28-59) kg/m². The median percentage excess weight loss was 39 (5-79)%.

95% were cured or had significant improvement in their diabetes. Two patients (6%) had no improvement in their diabetes. Of 15 patients with insulin dependent diabetes, 40% (6) were cured and off all diabetic medication. The remaining 60% (9) had marked reduction in insulin requirements. Of 23 patients with Non-Insulin Dependent Diabetes, 78% (18) were cured of their diabetes. A further 9 % (2) were significantly improved. Eight percent derived no benefits. Ninety three percent (14) of patients undergoing LRYGBP were cured of their diabetes compared with 50% (11) undergoing LGB ($p < 0.05$), Median excess weight was 48 (18-79)% versus 31 (5-61)% ($p < 0.05$, Mann-Whitney test) respectively.

Conclusion:

Bariatric surgery is very effective for treatment of both insulin and non-insulin dependant diabetes in morbidly obese patients. LRYGP is more effective than LGB. This is likely related to a greater weight loss.

P35. EARLY BAND SLIPPAGE IS AN AVOIDABLE COMPLICATION OF LAPAROSCOPIC GASTRIC BAND INSERTION. Rishi Singhal, MRCS, Alison Guy, MB ChB, Kathryn Hunt, MB ChB, Paul Super, FRCS, Heart of England NHS Foundation Trust, Birmingham, West UK.

Background:

Slippage rates of 1 -20 % are frequently quoted following adjustable gastric banding. This complication can be extremely serious and has led to many units offering the more invasive gastric bypass in the management of morbid obesity. We present results of the first 400 Laparoscopic Bands performed in our unit.

Methods:

Between July 2003 and May 2005, 400 consecutive patients, mean weight 115.6 Kg (range 79 -222 Kg), mean BMI 42.5 kg/m² (range 35 – 73) underwent LAGB. *pars flacida* insertion and 3 tunnelling sutures were used in all cases. Fluoroscopy-guided adjustments were performed at 3 and 6 months (and occasionally at 9-12 months). Patients who experienced vomiting or pain on eating had urgent fluoroscopic evaluation.

Results:

The mean duration of the procedure was 59.5 minutes (range 40 to 140 minutes). All patients were discharged the next day following surgery, except for 4 patients who stayed for 2 days. Excess weight loss at 3, 6, 12 and 18 months was 20.3 +/- 10.5%, 25.9 +/- 13.3%, 29.6 +/- 17.3% and 34 +/- 20.3%. There were 2 pouch dilatations observed at 10 and 18 months in separate patients. No band slippages were observed during the study period.

Conclusion:

These results demonstrate an absence of early band slippage probably due to operative technique and perhaps also secondary to strict band filling protocols. Our technique and protocols avoid this dangerous complication of the procedure and at the same time allow for effective weight loss.

P36. SIGNIFICANTLY ABNORMAL LIVER HISTOLOGY ACCOMPANIES MORBID OBESITY IN INDIVIDUALS UNDERGOING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGBP). Donald E. Yarbrough, MD, Ronald H. Clements, MD, Teresa Leath, RN, Audrey J. Lazenby, Gary A. Abrams, MD, University of Alabama, Birmingham, AL.

Background:

Injury to the liver from fatty infiltration can be significant leading to cirrhosis, hepatic failure and transplantation. The incidence of non-alcoholic fatty liver disease (NAFLD) is increasing as morbid obesity increases.

Methods:

Demographics, clinical data and LFT's were prospectively collected for patients undergoing LRYGBP. Core needle biopsy was obtained. Routine histological examination was performed, and the incidence and severity of liver steatosis, fibrosis and NASH were evaluated on a standardized grading system using accepted definitions.

Results:

272 patients (237 [87%] females) with average BMI 48.3±7.1 (35.0-76.6, range), were evaluated. Steatosis was graded as minimal, 57 pts (21%), mild 93 pts (34%), moderate 65 pts (24%) and severe 57 pts (21%). Fibrosis was graded as none 98 (36%), mild 145 (53.3%), and advanced [bridging or cirrhosis] 29 (10.7%). NASH was present in 98 pts (36.0%), and isolated portal fibrosis was noted in 84 pts (30.9%). Elevated AST and ALT did not predict histology (see Table).

Conclusion:

The presence and severity of NAFLD is not predicted by clinical assessment and can only be determined histologically. Therefore, core needle liver biopsy should be performed routinely during LRYGBP.

	Fatty Liver	Portal Fibrosis	NASH	TOTAL
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	N = 90	N = 84	N = 98	N = 272
AST* Normal	85 (94.4)	76 (90.5)	64 (65.3)	225 (82.7)
Elevated	5 (5.6)	8 (9.5)	34 (34.7)	47 (17.3)
ALT* Normal	70 (77.8)	65 (77.4)	50 (51.0)	185(68.0)
Elevated	20 (22.2)	19 (22.6)	48 (49.0)	87 (32.0)

*All data are N (%).

P37. COMPLICATED ULCER DISEASE FOLLOWING RYGBP. Donald Scholten, MD, Wayne VandeKolk, MD, Stephen R. Goldman, Spectrum Health, Grand Rapids, MI.

Background:

Morbid obesity remains a significant health problem for many Americans. As the number of patients undergoing Roux-en-Y Gastric bypass grows, so does the potential for the development of complications in the bypassed stomach. One rare complication of the gastric remnant is perforation with or without bleeding.

Methods:

MacGregor et al reported perforation of the gastric remnant in only 11 of 4300 patients. Ulcer formation is most often complicated by the development of gastrointestinal bleeding. Upper and lower endoscopies are still the first diagnostic choice in the management of gastrointestinal bleeding, but neither allows access to the bypassed stomach. Angiography and nuclear-tagged scans can be helpful, but both require active bleeding, are often non-diagnostic, and can be difficult to obtain in critically ill patients. We report a series of seven patients who presented with complicated ulcer disease in the remnant stomach.

Results:

In our series five patients presented as new onset of right sided and/or epigastric pain, one presented in relation to another surgical problem and one presented in relation to the use of NSAID medication. There was one death; the other six underwent operative intervention.

Conclusion:

Conclusions: Perforation and bleeding from gastroduodenal ulcer formation are rare but serious complications in patients who have had Roux-en-Y gastric bypass. These patients most often present with pain followed by sepsis or SIRS, anemia of unknown etiology, or gastrointestinal bleeding without an identifiable source.

P38. QUALITY OF LIFE 5-10 YEARS AFTER BARIATRIC SURGERY. Marlene M. Silva, Celina D.B. Sobreira, Alexandre Capeletto, Marta Magalinski, Cristiane E. Machado, Bruno Zilberstein, MD, PhD, Denis Pajacki, MD, PhD, Joel Faintuch, MD, PhD, Hospital das Clinicas, Sao Paulo, Brazil.

Background:

Roux-en-Y gastric bypass is an accepted anti-obesity procedure, but long-term results are not well established. In a prospective study, patients were investigated aiming to define long-term quality of life.

Methods:

Population (n= 73) was 49.7 +/- 10.2 years old, 83.6% were females (66/73), and follow-up period was 88.6 +/- 12.8 months. Initial, minimum postoperative, and current BMI were respectively 56.6 +/- 10.9, 30.2 +/- 4.8 and 35.7 +/- 10.9 kg/m². Both BAROS and SF-36 questionnaires were employed, along with clinical evaluation.

Results:

BAROS revealed an encouraging profile (1.5 +/- 0.6 points) and several topics in SF-36 improved as well. However in 49.6% of those subjects with current BMI > 35 kg/m² (total group = 37/73, 50.7%) co-morbidities did not decrease, emotional, and pain domains of SF-36 remained stable, and mental health item diminished on late follow-up.

Conclusion:

1) Quality of life was only partially improved after five years, with mixed results on SF-36 questionnaire; 2) Some degree of late weight gain and recurrence of co-morbidities may have played a role in such outcome;

P39. NON-FOOD COMPULSIONS IN BARIATRIC CANDIDATES. M.A. Bicudo, Mara C.S. Lucia, Niraldo O. Santos, Marlene M. Silva, Denis Pajacki, MD, PhD, Joel Faintuch, MD, PhD, Bruno Zilberstein, MD, PhD, Joaquim J.G. Rodrigues, MD, PhD, Hospital das Clinicas, Sao Paulo, Brazil.

Background:

Aberrant alimentary patterns are well demonstrated in obese subjects, but other compulsions are controversial. In a prospective study, morbidly obese pre-operative patients were submitted to a detailed psychological and social questionnaire, aiming to identify abnormal behavior.

Methods:

Population (n= 50, age 46 +/- 6 years (18- 60), 66% females, BMI 48.2 +/- 7.5 kg/m²) agreed to be interviewed at the Outpatient Service by experienced psychologists. Findings are shown as percentage of total group.

Results:

The following disturbances were reported: in 66% (33/50) excessive expenses with credit-card or other financial instruments, in 22% (11/50) difficulty in handling appointments and schedules, and in 8% (4/50) unbridled sexual drive. Most (60%, 30/50) considered themselves uncontrolled persons, and 10% (5/50) felt chronically nervous and anxious.

Conclusion:

1) Emotional lability and compulsive behavior was not uncommon in the studied population; 2) Some of these derangements may be primary components of the obesity complex ; 3) The possibility of an adverse surgical outcome in affected subjects cannot be ruled out;

P40. AMELIORATION OF DIABETIC NEPHROPATHY AFTER GASTRIC BYPASS SURGERY. Christopher D. Still, DO, FACN, Christina Hartman, Peter Benotti, MD,FACS, Anthony Petrick, MD,FACS, William Strodel, MD,FACS, Stephanie Yeager, RD, Mary Jane Reed, MD,FACS, Geisinger Medical Center, Danville, PA.

Background:

Many studies have shown the dramatic, positive changes in macrovascular disease states such as diabetes mellitus and cardiovascular risk reduction after gastric bypass surgery (GBP). To date however, few studies have evaluated the effect of gastric bypass on microvascular changes such as diabetic nephropathy

A non-invasive urine marker to approximate the urinary excretion of protein is the micro-albumin creatinine ratio. The simultaneous urinary creatinine measurement allows for more accurate approximation of albumin excretion by adjusting for variations in patient's hydration state. This is one of several validated screening tests for diabetic nephropathy. The purpose of this study was to determine the change, if any, in micro-albumin/creatinine ratio in diabetics after gastric bypass surgery

Methods:

Baseline micro-albumin/creatinine ratios were obtained in 56 diabetic patients (male: 20; female 36) prior to undergoing GBP. Pre surgery results were compared to one-year post-surgical ratio. A two-sample t-test was used to determine significance. Less than 21 mg/gm was considered normal.

Results:

Mean pre-operative micro-albumin/creatinine ratio was 58.40 mg/gm. At one year follow up the average micro-albumin/creatinine ratio decreased significantly to acceptable value of 18.26 mg/gm.

Conclusion:

Our preliminary results show significant improvements in micro-albumin/creatinine ratio and therefore amelioration of diabetic nephropathy after GBP. GBP results in not only significant macrovascular improvements but microvascular improvements as well. Our on going study will continue to look at these as well as other possible indicators of microvascular disease.

**P41. PATIENT SELECTION OF VITAMIN B12 (CYANOCOBALAMIN) ADMINISTRATION ROUTE AND HOW THIS EFFECTS OUTCOMES AND COMPLIANCE. Cathy Mozo, RD¹, Leslie Berry, RD¹, Steven Webb, MD, FAC², John DePeri, MD FAC²,
¹Laparoscopic Weight Loss Surgery Centers, Orange Park, FL. ²North Florida Surgeons, Jacksonville, FL.**

Background:

Bariatric Patients undergoing gastric bypass surgery are routinely educated on the need to supplement Vitamin B12 after bypass due to lack of absorption. This lack of B12 absorption is related to the need for the cells lining the stomach to secrete a glycoprotein called intrinsic factor and to combine with B12 to form a B12-intrinsic factor complex for absorption in the ileum. Non-compliance with vitamin supplementation is an ongoing challenge with health care providers.

Methods:

The study population included 30 post gastric bypass patients who were given an option of B12 supplementation routes. Among these options were sublingual B12 1000 mcg every week, nasal gel administration 500 mcg 1 spray per week, or an injection of B12 monthly

of 1000 mcg. Patients were routinely educated by the Registered Dietitian to let the sublingual tablet dissolve completely under the tongue and to not chew the tablet. In addition, instructions were provided on proper administration of the nasal B12.

Results:

When given a choice of Vitamin B12 administration routes, 25 out of 30 patients chose the sublingual B12 over all other options due to the ease of administration and convenience of obtaining. One patient chose nasally administered B12 and four patients chose injectable B12 due to primary care recommendation. All 30 patients had serum B12 levels within the normal value.

Conclusion:

When patients are given a choice of supplements and are able to choose the route that most meets their lifestyle needs, they are more compliant. There are several methods of B12 supplementation that can be utilized with equal outcomes.

P42. GALLSTONE DISEASE AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS. Alex Escalona, MD, J. Francisco Guerra, MD, Nicolas Devaud, MD, Gustavo Perez, MD, Fernando Crovari, MD, Luis Ibez, MD, Pontificia Universidad Católica de Chile, Santiago, Chile.

Background:

Morbid obesity is a well-known risk factor for gallstone disease. Laparoscopic Roux-en-Y Gastric Bypass (LRYGBP) is an effective bariatric surgical procedure for treating morbid obesity. The aim of this study is to evaluate the incidence of gallstone disease among patients who have undergone LRYGBP.

Methods:

723 patients underwent LRYGBP between August 2001 and August 2005. All patients had a pre-surgery abdominal ultrasound (US). 565 patients had no evidence of gallstone disease prior LRYGBP and were prospectively followed during early and late post operative period. Clinical and demographic data together with surgical results were registered. Gallstone diagnoses was made through abdominal ultrasound performed in symptomatic patients and after 12 months follow-up in non-symptomatic patients. The median follow up was 15.9 months

Results:

Gallstone free rate was 96% after one year follow-up and 92% after 2 years. 32 patients (5.7%) developed gallstone disease after LRYGBP. 28 of them (86%) were female, with a mean age of 32 ± 6 years. The mean time period for diagnosis was 13 ± 3 months after LRYGBP. 19 patients (59.3%) developed symptomatic cholelithiasis, including two cases with acute cholecystitis. 1 patient (3.1%) developed acute pancreatitis secondary to choledocholithiasis. Twelve patients (37.5%) showed no symptoms of gallstone disease being diagnosed with a follow-up abdominal US. 31 patients underwent laparoscopic cholecystectomy after diagnosis. There were no complications post surgery.

Conclusion:

Patients who undergo LRYGBP have a low incidence of gallstone disease after surgery. In those who develop the disease, laparoscopic cholecystectomy is a safe procedure after LRYGBP.

P43. DESCRIPTION OF PSYCHOLOGICAL PROFILE IN THE MORBIDLY OBESE. ANALYSIS OF 644 MMPI-2 TESTS BEFORE BARIATRIC SURGERY. Sergio J Bardaro, MD, Emma Patterson, MD, Jay Jan, MD, Laura July, MD, Luahna Ude, PhD, Robert Poole, PhD, Dennis Hong, MD, Legacy Health System, Portland, OR.

Background:

Bariatric surgery is the treatment of choice for morbid obesity, but it does not lead to equal results in every patient. Psychological factors may influence patients' ability to adjust to the post-operative condition. We routinely administer the Minnesota Multiphasic Personality Inventory – 2 (MMPI-2) as a preoperative assessment to evaluate patients' psychological characteristics.

Methods:

The preoperative MMPI-2 tests in 644 patients that underwent bariatric surgery were analyzed retrospectively. We focused on the validity and clinical scales to assess psychological profile of the morbidly obese. Normal range for both scales were between 45 -65.

Results:

Between October 2000 and May 2005, 644 out of 953 patients that underwent bariatric surgery had MMPI-2 tests performed. Mean age was 44.4 ± 10.5 , 85.2 % females and 14.8 % males. Preoperative body mass index was 49.6 ± 7.9 Kg/m².

The validity scale demonstrated the following T scores: Infrequency 52.6 ± 10.2 , Lie 53.1 ± 9.5 , Correction 55.6 ± 10 . The clinical scale: Hypochondriasis 66.4 ± 10.2 , Depression 61.2 ± 12.1 , Hysteria 65.6 ± 11.6 , Psychopathic Deviate 57.6 ± 9.4 , Masculinity-Femininity 48.9 ± 9.9 , Paranoia 52.3 ± 10.1 , Psychasthenia 57.6 ± 9.7 , Schizophrenia 55.8 ± 9.2 , Hypomania 49.1 ± 8.5 and Social Introversion 51.9 ± 10.9 .

Conclusion:

Although mild elevation on Hypochondriasis and Hysteria T scores were obtained, our data suggests that morbidly obese patients present an average psychological profile that correlates with the general population. Mandatory MMPI-2 test without evident psychopathology during routine preoperative psychological evaluation remains controversial.

P44. SPLENIC ARTERY EROSION BY GASTROJEJUNOSTOMY ANASTOMOTIC ULCERATION CAUSING MASSIVE HEMORRAGE IN POST OPERATIVE PERIOD. REVIEW OF TWO CASES AND PROPOSAL FOR WORKUP AND MANAGEMENT OF SERIOUS HEMORRAGE IN THE POSTOPERATIVE GASTRIC BYPASS PATIENT. Mary J Reed, MD, Antony Petrick, MD, Michael St Jean, MD, Stephanie Sewesky, MD, John Baxter, MD, Peter Benotti, MD, Geisinger Medical Center, Danville, PA.

Background:

Massive enteric hemorrhage is rare after Roux-en-Y gastric bypass. Most etiologies include bleeding staple lines in the immediate post operative period or anastomotic ulceration of gastrojejunostomy in the later post operative period.

Methods:

We present two cases of splenic artery erosions at the gastrojejunostomy anastomosis. One treated operatively and one treated with interventional radiology. We compare the overall blood products, hospital courses and complications of these two patients.

Results:

The patient treated with interventional radiologic coiling, had less complications, less blood loss and left the hospital earlier.

Conclusion:

Although rare, splenic artery erosion is a devastating complication of Roux-en-Y gastric bypass. As with any rare entity, one must think of the diagnosis prior to treating it. We suggest that, in massive enteric hemorrhage after gastric bypass, one's algorithm should include consideration of splenic artery erosion and splenic artery angiogram.

P45. PREOPERATIVE HYPERCAPNIA AS A RISK MARKER FOR POSTOPERATIVE RESPIRATORY FAILURE IN THE PATIENT WITH SLEEP APNEA: A REPORT OF TWO CASES. Matthew A. Fitzer, MD, J. Steven Scott, MD, Roger de la Torre, MD, University of Missouri Hospitals and Clinics, Columbia, MO.

Background:

It is increasingly recognized that patients with Obstructive Sleep Apnea (OSA) are abnormally sensitive to factors that suppress respiratory drive, and they therefore risk developing serious complications due to postoperative respiratory failure. Scant clinical data exists pertaining to respiratory failure in patients with OSA after abdominal surgery, and no risk factors for respiratory failure within this population have been identified.

Methods:

We describe postoperative respiratory failure in two obese patients with OSA. Both had preoperative hypercapnia.

Results:

Patient #1, a 52-year-old male with a BMI of 57 and pCO₂ of 66, underwent a laparoscopic Roux-en-Y gastric bypass (LRYGBP) and was observed postoperatively in an ICU. Morphine was used sparingly for pain. On postoperative day one, he was comfortable but increasingly drowsy. An ABG revealed a pH of 7.24 and pCO₂ of 85. Morphine was discontinued and CPAP instituted. His pCO₂ returned to baseline, and he was discharged home on day five. Patient #2, a 46-year-old male with a BMI of 55 and pCO₂ of 52, underwent a LRYGBP and was transferred postoperatively to a step-down unit. Conservatively-dosed morphine was used for analgesia. On postoperative day one, he became somnolent and confused. An ABG showed a pH of 7.10 and pCO₂ of 95. Narcan was administered, and the pCO₂ returned to baseline. He was discharged home on postoperative day four.

Conclusion:

Among patients with OSA, those with preoperative hypercapnia may have a particularly high risk for the life-threatening complications of postoperative respiratory failure. Health professionals caring for these patients should be aware of this risk.

P46. LAPAROSCOPIC BARIATRIC SURGERY IS VERY EFFECTIVE FOR THE TREATMENT OF OBESITY-RELATED DIABETES. Krishna Dr Bitra, Colm Mr O'Boyle, FRCS, Peter Mr Sedman, FRCS, Christopher Mr Royston, FRCS, Patrick Mr Moore, FRCS, Hull Royal Infirmary, Hull, East UK.

Background:

To compare efficacy of Laparoscopic Gastric Banding (LGB) and Laparoscopic Roux-en-Y-Bypass (LRYGBP) for the treatment of Diabetes in morbidly obese patients.

Methods:

A retrospective analysis of all morbidly obese patients with Diabetes Mellitus undergoing laparoscopic bariatric intervention at a single sub-specialist centre.

Results:

Between June 2001 and July 2005, 41 morbidly obese diabetic patients underwent laparoscopic bariatric surgical interventions. 42% (16) underwent LRYGP and 58% (22) underwent LGB. Three patients (7%) were lost to follow up. The median age (range) was 45 (22-72) years. The median postoperative follow up was 21 (2-27) months. The median preoperative BMI was 50 (35-72) kg/m². The median postoperative BMI was 39 (28-59) kg/m². The median percentage excess weight loss was 39 (5-79) %.

95% were cured or had significant improvement in their diabetes. Two patients (6%) had no improvement in their diabetes. Of 15 patients with Insulin Dependent Diabetes, 40% (6) were cured and off all diabetic medication. The remaining 60% (9) had marked reduction in insulin requirements. Of 23 patients with Non-Insulin Dependent Diabetes, 78% (18) were cured of their diabetes. A further 9 % (2) were significantly improved. Eight percent derived no benefits. Ninety three percent (14) of patients undergoing LRYGBP were cured of their diabetes compared with 50% (11) undergoing LGB (p< 0.05), Median excess weight was 48 (18-79)% versus 31 (5-61)%,(p<0.05, Mann-Whitney test) respectively.

Conclusion:

Bariatric surgery is very effective for treatment of both insulin and non-insulin dependant diabetes in morbidly obese patients. LRYGP is more effective than LGB. This is likely related to a greater weight loss.

P47. IS LAPAROSCOPY PROTECTIVE AGAINST VENOUS THROMBO-EMBOLISM IN BARIATRIC SURGERY? 943 CONSECUTIVE LAPAROSCOPIC GASTRIC BYPASS OPERATIONS BETWEEN THROMBO-EMBOLIC EVENTS. Joshua Felsher, MD, Vera Freeman, MD, Liam Haveran, MD, Robin Mason, NP, Mitchell Cahan, MD, Don Czerniach, MD, Rich Perugini, MD, John Kelly, MD, University of Massachusetts, Westborough, MA

Background:

Venous thrombo-embolism (VTE) is a well-documented cause of morbidity and mortality following bariatric surgery. Obesity, immobilization and abdominal surgery all increase the risk of VTE. Anticoagulation, compression stockings and early ambulation are peri-operative measures that may decrease the risk of VTE. In addition to VTE prophylaxis, we propose that laparoscopic gastric bypass, performed with low conversion and complication rates, may eliminate VTE complications.

Methods:

Between June 1999 and October 2005, 945 patients underwent laparoscopic gastric bypass for morbid obesity by three surgeons at a single institution. Prophylactic low molecular weight heparin, compression stockings and early ambulation were utilized. Patients were followed prospectively for peri-operative VTE complications.

Results:

Patient demographics include a mean age of 43.2 years (range 20 – 70 years), a female to male ratio of 780:165, and a mean preoperative BMI of 50.7 (range 37 – 82). Mean operative time was 125 minutes (range 62 – 345 minutes). Four operations (0.4%) required conversion to an open technique. There were 13 leaks (1.4%). Two patients had a VTE (0.2%). The first patient in the series developed a deep vein thrombosis and 943 cases later, the last patient in the series experienced a pulmonary embolism. There were 3 postoperative mortalities (0.3%) in the first 30 days, none related to VTE.

Conclusion:

VTE is a well-documented and potentially serious complication following bariatric surgery. In addition to standard prophylactic measures, we propose a minimally invasive approach combined with a low conversion and complication rate, may in fact be protective against VTE.

P48. PREGNANCY OUTCOMES AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING FOR MORBID OBESITY. Mirto Foletto, MD¹, Luca Busetto, MD¹, Franco Favretti, MD¹, Gianni Segato, MD², Paolo Bernante, MD¹, Giuliano Enzi, MD¹, Donato Nitti, MD¹, ¹University of Padua, Padua, Italy, ²Vicenza General Hospital, Vicenza, Italy.

Background:

A large percentage of women submitted to bariatric surgery for morbid obesity undergoes surgery during childbearing years. Pregnancy in severely obese women is usually associated with increased maternal and infant risks.

Methods:

We here report the pregnancy outcomes of 29 morbidly obese women after laparoscopic adjustable gastric banding (LAGB). The data were obtained from our prospective data base and implemented by a questionnaire oriented to assess maternal, pregnancy and infant outcomes.

Results:

Twenty-nine women from a cohort of 1359 consecutive female patients operated between January 1994 through June 2005, reported pregnancy after LAGB. The mean age was 38.9 ± 3.1 y and the mean BMI at the time of LAGB was 46.2 ± 7.9 .

Maternal outcomes: the mean weight gain during pregnancy was 4.89 ± 4.43 kg. Three patients showed no weight modification before and during pregnancy. Gestational diabetes was reported in 10%, hypertension (without evidence of pre-pregnancy hypertension) in 17% and pre-eclampsia/eclampsia in 15% of cases. Five (17%) patients required band deflation during pregnancy.

Pregnancy outcomes: one spontaneous abortion was recorded (13th gestational week). This lady had a later successful pregnancy. Twenty-six percent had pharmacologically assisted delivery while caesarean section was carried out in 42% of cases.

Infant outcomes: Thirty babies were delivered (1 twin delivery), no stillbirth was recorded. The mean birth weight was 3243 ± 617 g and 5 (17%) were preterm birth.

Conclusion:

Weight reduction after LAGB is safe and effective enough to allow good pregnancy outcomes comparable to those of general population.

P49. GENERAL ANESTHESIA WITH SUPER-IMPOSED HIGH FREQUENCY JET VENTILATION CAN REDUCE PEAK AIRWAY PRESSURE AND IMPROVE OXYGENATION DURING LAPAROSCOPIC BARIATRIC SURGERY. Kazunori Kasama, MD¹, Satoko Ishikawa, MD², ¹Horie Hospital, Ohta, Japan ²Ohta General Hospital, Ohta, Japan.

Background:

Laparoscopic bariatric surgery rapidly spread worldwide because of less invasiveness. Despite of advantages, laparoscopic surgery is associated with more pronounced intra-operative respiratory changes than open surgery. Morbid obesity patients have a decrease in respiratory system compliance. These changes cause a decreased pulmonary reserve, faster desaturations and make them more difficult to ventilate with positive pressure ventilation. Pneumoperitoneum during laparoscopic surgery contributes to high peak airway pressure (PAP), decrease in the Functional Residual Capacity (FRC) and increasing PaCO₂.

Commonly performed maneuvers to improve oxygenation during laparoscopy may not be effective. High Frequency Jet Ventilation (HFJV) is classically used for thoracic or neo-natal surgery. Continuous Mandatory Ventilation (CMV) + inspiratory phase synchronized HFJV, so called Super Imposed HFJV, is thought effective to reduce PAP and improve oxygenation.

Methods:

We used Super Imposed HFJV for 5 patients as the ventilation for general anesthesia. Average BMI was 49. Surgical procedures were one laparoscopic sleeve gastrectomy, two laparoscopic gastric bypasses and two lap bandings. Tidal volume of CMV was initially 600ml. Parameters of HFJV were set as 0.6-0.8kgf/cm² of working pressure, 3-5Hz of frequency, 33-40% of inspired oxygen. We used a MERA Anesthesia Machine MD-757XLV with High Frequency Jet Ventilator.

Results:

Before HFJV average PAP was 30 ± 2 , HFJV reduced this to 26 ± 2 and maintained the same ETCO₂. SpO₂ was improved from 92 ± 3 % to 98 ± 2 %. Surgeons did not notice any change due to High Frequency movement during operation.

Conclusion:

Super imposed HFJV is feasible, safe and an easy method of anesthesia for laparoscopic bariatric surgery.

P50. THE USE AND MODIFICATION OF STANDARDIZED FITNESS TESTS FOR ASSESSMENT OF HEALTH STATUS IN MORBIDLY OBESE PATIENTS. Justine Strauss, EP, Robert T. Marema, MD, Cynthia K. Buffington, PhD, U.S. Bariatric, Ft. Lauderdale, FL.

Background:

Reports suggest that, in the general population, fitness is reflective of health status and may be beneficial in predicting surgical

outcome. In our study, we determined how well morbidly obese patients perform on standardized fitness scales and the feasibility of such tests in assessing health status.

Methods:

The study population included bariatric patients whose BMI ranged from 26 to 57. Prior to weight loss intervention patients were given a standard fitness test for assessment of flexibility, strength (dynamometer), and cardiovascular fitness (McArdle Step Test). Health status was determined by number of major co-morbidities.

Results:

Data show that both body weight and waist circumference are significant predictors of levels of fitness among individuals with obesity. Patients who score poorly on strength and flexibility ($p < 0.05$) tests are significantly heavier and have greater waist circumference ($p < 0.01$) than those who perform well on these measures. Increased waist circumference and body size also have a highly significant ($p < 0.01$) impact on performance of the cardiovascular McArdle Step Test, even with step height adjustment. Morbidly obese patients, in comparison to their less obese counterparts, perform poorer ($p < 0.05$) on all measured components of fitness and testing procedures require modification. Individuals with the lowest levels of fitness are also those with the poorest health status and greatest number of major co-morbidities ($p < 0.01$).

Conclusion:

Levels of fitness and associated health status deteriorate as body size increases, particularly among obese individuals with abdominal adiposity. Standardized fitness tests can be modified to attain fitness status of the morbidly obese.

P51. HOW DO FAMILY PRACTITIONERS PERCEIVE SURGERY FOR THE MORBIDLY OBESE? Stacie E. Perlman, MD, Randolph Reinhold, MD, Geoffrey S. Nadzam, MD, Hospital of Saint Raphael, New Haven, CT.

Background:

Little is known about the level of knowledge of and comfort with bariatric surgery among family practice physicians.

Methods:

Surveys were sent to all family practitioners in Connecticut querying practice type and knowledge of bariatrics. Results were analyzed for prevalence of opinion.

Results:

129 of 620 (21%) surveys were completed. Respondents were 73% male, aged 31-79. 92% were board certified with an average of 19 years experience. Average BMI of respondents was 26, (range 16-40). Only 4% of respondents had BMI > 30.

Rate of patient obesity was 43%. 88% of respondents felt obesity was difficult to control with diet/exercise alone. Only 6% thought obesity was best controlled surgically. 85% of respondents had referred a patient for gastric bypass, though only 57% felt comfortable explaining the procedure. The most common reason for refusal to refer was fear of complications and death.

55% correctly listed BMI 40 as qualifying for bariatric surgery without co-morbidities. 48% identified the mortality rate of surgery as < 1%, with 4% of respondents reporting > 10%. 84% were familiar with gastric bypass, 66% with LapBand, 33% with vertical banded gastroplasty, and 5% with duodenal switch. Respondents felt nausea was the most common side effect, next to anemia and fatigue. 53% felt bowel obstruction was common.

Conclusion:

Misconceptions about bariatric surgery exist in the family practice community despite the increasing frequency of these procedures. Educational programs need to be designed to assist family practitioners in managing and referring obese patients.

P52. LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS PROVIDES SUCCESSFUL WEIGHT LOSS IN MORBIDLY OBESE ASIANS AND PACIFIC ISLANDERS. Cedric S.F. Lorenzo, MD, Edith Ramsdell, MD, V. Ted Leon, MD, Julie Curtis, RD, Stephanie Kong, PsyD, Alyssa D. Chapital, MD, Hao Chih Ho, MD, Valerie Kauhane, BSN, Kenric M. Murayama, MD, University of Hawaii, Department of Surgery, Honolulu, HI

Background:

Studies show African-Americans may lose less weight after laparoscopic Roux-en-Y gastric bypass (LRYGBP) than Caucasians. Weight loss patterns after bariatric surgery in other ethnic groups is undetermined. We sought to determine effectiveness of LRYGBP in morbidly obese Asians and Pacific Islanders.

Methods:

We reviewed records of 78 patients who underwent LRYGBP over a 20 month period: 42 Caucasians, 14 Asians, 14 Pacific Islanders

and 8 other (Hispanic, Black or Cosmopolitan). Outcome measures were percentage excess body weight (EBW) lost at 1, 3, 6, and 12 months postoperatively. Statistical analysis was performed using the SPSS program.

Results:

Average age of patients was 47 years. Average initial BMI and EBW were 48.6 kg/m² and 75.7 kg, respectively. There was no statistical difference between ethnic groups regarding age and initial BMI. Average preoperative weight and height of Asians (117 kg, 155 cm) was significantly less than other ethnic groups (Caucasians – 130 kg, 162 cm, Pacific Islanders – 156 kg, 171 cm, other – 142 kg, 162 cm).

Table 1: Percent Excess Body Weight Lost

	1 month (N=78)	3 month (N=64)	6 month (N=51)	12 month (N=21)
Caucasians	17.6	32.1	49.6	65.1
Asians	16	30.9	48.1	70.2
Pacific Islanders	18.9	32.1	49.1	60
Other	16.7	28.3	44.4	64

Conclusion:

Preoperative BMI in the morbid obesity range is a good predictor of weight loss after LRYGBP regardless of initial weight and height. Morbidly obese Asians or Pacific Islanders can expect similar rates of excess body weight loss after LRYGBP as other ethnic groups.

P53. NATURAL HISTORY OF HEPATITIS C FOLLOWING GASTRIC BYPASS SURGERY. Rob Schuster, MD, Ramzi S. Alami, MD, Myriam J. Curet, MD, Sherry M. Wren, MD, Bassem Y. Safadi, MD, John M. Morton, MD, Stanford University, Stanford, CA.

Background:

Hepatitis C, non-alcoholic fatty liver disease, and morbid obesity are all growing health concerns in the United States. Gastric bypass surgery has proven to be an effective treatment for morbid obesity and is becoming more widespread. Many of these patients may be infected with the Hepatitis C virus and their clinical course after gastric bypass has not been described.

Methods:

All patients who underwent gastric bypass surgery and were hepatitis C positive were included in the analysis.

Results:

11 patients with Hepatitis C who underwent gastric bypass surgery (2 open, 9 laparoscopic) were followed. There were 9 male patients and 2 female patients with an average age of 55 years who had pre- and postoperative liver biopsies with an average follow-up of 8 months. Preoperative body mass index (BMI) was 51 and postoperative BMI was 36, (p < 0.01). No patients received antiviral therapy pre- or postoperatively. Three patients with mild steatosis on preoperative liver biopsy had stable postoperative biopsy results. One patient with non-alcoholic steatohepatitis (NASH) improved to mild steatosis. Two patients with preoperative fibrosis on biopsy worsened to fibrosis and inflammation postoperatively and 2 patients with inflammation on preoperative biopsy worsened to fibrosis postoperatively. All patients with deteriorating liver biopsy results had diabetes mellitus as a co-morbidity diagnosis.

Conclusion:

Morbidly obese patients positive for Hepatitis C who are considered for gastric bypass surgery should undergo preoperative liver biopsy. Diabetes mellitus and biopsy findings of inflammation and/or fibrosis may be predictive of worsened postoperative biopsy results.

P54. CIGARETTE SMOKING SIGNIFICANTLY REDUCES PROTON PUMP INHIBITOR (PPI)-ASSOCIATED ANASTOMOTIC (MARGINAL) ULCER HEALING IN ROUX-EN-Y GASTRIC BYPASS (RYGBP) PATIENTS. John B. Marshall, MD, Dawn M. Miller, MA, Aviv Ben-Meir, MD, Helmut Schreiber, MD, Indukumar Sonpal, MD, Linda Patterson, MD, Mark Salomone, MD, Karen Schulz, RN, Cleveland Center for Bariatric Surgery at St. Vincent Charity Hospital, Case Western Reserve University, Cleveland, OH.

Background:

We previously demonstrated the association of smoking with development of anastomotic ulcers post-RYGBP (Schreiber et al. 2005), and in the absence of H. pylori (Ben-Meir et al. 2005). We postulate that anastomotic ulcers result from the effect of acid on jejunal mucosa, and that smoking adversely affects PPI-associated ulcer healing.

Methods:

We retrospectively reviewed medical records for all primary bariatric procedures from January 2002 - September 2004 to identify patients who subsequently developed ulcers. Standard treatment was 40 mg daily PPI for two months. Patients were classified as past,

current, or non-smokers at time of diagnosis and during PPI therapy. Patients were instructed to return for endoscopy following treatment.

Results:

CCBS performed 2,642 RYGBPs during the 33-month study period. Ninety-two (3.5%) patients developed an endoscopy-confirmed anastomotic ulcer (mean time 5.5 mos., +/- 6.0 from RYGBP to ulcer development). Forty-one (44.6%) patients returned for post-PPI therapy endoscopy. Twenty-four (59%) were past smokers, 21 (51%) were smoking at time of ulcer development and 7 (17%) continued to smoke during therapy. Two months of PPI therapy resulted in complete ulcer healing in 58% of non-smokers vs. only 23% of smokers ($x_2 = 9.76$, $p < 0.01$). Similarly, ulcers were more than 95% healed in 89% of non-smokers vs. 41% of smokers ($x_2 = 10.4$, $p < 0.01$).

Conclusion:

Two months of PPI therapy resulted in healed ulcers in significantly more non-smokers than smokers. Complete ulcer healing in non-smokers may require three rather than two months of PPI therapy, and smokers at least six months. Smoking cessation is crucial in promoting ulcer healing.

P55. THE NON-SURGICAL PATIENT: A GREATER CHALLENGE FOR NURSES. Daniel J. Drake, RN, BSN¹, Kathy Dutton, RN, MSN¹, Martha Engelke, RN, PhD², Maura McAuliffe, RN, PhD², Marie Pokorny, RN, PhD², Frank Wakins, RN, MSN¹, Gloria Baker, RN, BSN², Melvin Swanson, PhD², Wanda Waters, RN, BSN¹, Mary Ann Rose, RN, EdD², ¹Pitt County Memorial Hospital, ²East Carolina University

Background:

Significant challenges that acute care nurses face in caring for morbidly obese patients have been described by the investigators (Drake et al, 2005). While the earlier study examined challenges to nurses in the acute care setting, it did not address issues in the non-acute setting, nor did it elicit solutions that nurses used to overcome these problems and enhance the quality of life of patients. For example, while safety concerns were a repeated theme, there were little data in that study that provided specific strategies for improving safety.

Methods:

The instrument for this descriptive study was developed by the investigators based on the data from the earlier study. Questions were devised for areas identified in the earlier study as problematic. Responses were sought on what measures nurses used to overcome these challenges and enhance patient's quality of life.

The instrument is currently under review by experts in bariatric nursing and also a statistician. Funding has been obtained to conduct the study in January, 2006. Subjects include the entire registered nurse membership of the National Association of Bariatric Nurses. (N=150).

Results:

Data will be summarized using descriptive statistics. Responses to open-ended questions will also be discussed.

Conclusion:

This study extends previous work by the authors in two important ways. It examines challenges in providing care for patients in non-hospital settings and it begins the dialogue on creatively addressing the nursing care challenges of the morbidly obese client.

P56. VA/DOD EVIDENCE BASED GUIDELINE FOR OBESITY TREATMENT: OBESITY SURGERY. Edward H. Livingston, MD¹, David Arterburn, MD², Oded Susskind, MPH², ¹UT Southwestern, Dallas, TX, ²University of Cincinnati, Cincinnati, OH.

Background:

There has been a confusing array of reviews and guidelines regarding bariatric surgery resulting in inconsistent insurance coverage. Lacking, has been a well defined approach for reviewing the available literature resulting in a treatment guideline that can be used for national policy determination

Methods:

The Veterans Administration (VA) and Department of Defense (DoD) assembled a panel of experts in the fields of Internal Medicine, Family Practice, Surgery, Health Service Research, Obesity Treatment, Biostatistics, Pharmacy, Nutrition and Nursing. This panel followed standardized protocols for the assessment of the bariatric surgery literature and developed treatment guidelines that were graded based on the strength of the evidence supporting each recommendation. All prior reviews of bariatric surgery and published clinical trials up to February 2005 were considered in the committee's deliberations.

Results:

There is level A evidence (Quality of evidence is good and magnitude of the effect substantial) that Roux-en-Y gastric bypass surgery should be offered for appropriately selected patients with BMI>40 to induce weight loss. Evidence is less compelling for co-morbidity control and quality of life improvements. There is insufficient information to recommend bariatric surgery for the elderly, those with substantial surgical risk or adolescents.

Conclusion:

The VA and DoD has completed a year-long effort using a structured process to evaluate the strength of the evidence in support of Bariatric Surgery. The resultant document will serve as the treatment guideline for the VA and DoD. These guidelines should replace the 1991 NIH guidelines that were based on substantially less data than the current set.

P57. RETRIEVABLE INFERIOR VENA CAVA FILTERS IN BARIATRIC PATIENTS. Alex J. Gruneiro, MD, Laura A. Gruneiro, MD, Geisinger Wyoming Valley Medical Center, Wilkes-Barre, PA.

Background:

Bariatric patients have a significant risk of pulmonary embolus(PE). The role of retrievable inferior vena cava (IVC) filters in this population is still unclear. The purpose of this study is to review our experience with retrievable IVC filters in bariatric patients.

Methods:

We prospectively reviewed all patients undergoing gastric bypass at our institution over the past year. All patients at high risk for PE underwent filter placement on the morning of surgery and removal four weeks postoperatively. High-risk criteria included history of venous thromboembolism, hypercoagulable state, BMI > 55, venous insufficiency, sleep apnea, and impaired mobility.

Results:

Eighty-eight patients underwent Roux-en-Y gastric bypass; 81 laparoscopically, 7 open. The average age was 47 years and the average BMI was 47.8. One non-high-risk patient without a filter died suddenly on postoperative day 10 of presumed PE. Thirty-eight patients (43%) underwent filter insertion. Procedure time averaged 9 minutes. Two filter placements were aborted due to an IVC size > 30 millimeters. One patient developed a groin hematoma, managed conservatively. Twenty-seven filters (71%) were retrieved successfully without complication. Procedure time averaged 15 minutes. Filters were not retrieved in four patients with hypercoagulable states, four patients at their request, and three patients due to filter tilting such that retrieval was not possible.

Conclusion:

Prophylactic retrievable IVC filters can be placed and removed safely in high-risk bariatric patients. High-risk patients should be considered for retrievable IVC filters to reduce the incidence of PE.

P58. PREVALENCE OF H PYLORI INFECTION IN MORBIDLY OBESE PATIENTS UNDERGOING LAPAROSCOPIC GASTRIC BYPASS. Jeremiah S. Kurz, MD, Piotr J. Gorecki, MD, FACS, Aruna Sree, MD, Won Sohn, MD, New York Methodist Hospital, Brooklyn, NY.

Background:

The prevalence of Helicobacter pylori infection in the US population is age dependent and has been estimated to be 10% in patients 10 to 30 years of age to 50% in those older than 60. Several studies indicated a low prevalence of H. pylori in obese patients. In fact, some studies suggest that absence or eradication of H. pylori is associated with risk of developing obesity. We report on the prevalence of H. pylori in morbidly obese patients awaiting bariatric surgery at our institution.

Methods:

Patients undergoing laparoscopic gastric bypass underwent upper endoscopy and biopsy to investigate for H. pylori. All data were collected prospectively. Infection with H. pylori was documented histologically with gastric biopsy.

Results:

Data was available from 297 patients who had undergone bariatric surgery from August 7, 2001 to August 8, 2005. Of these patients, 264 were females and 33 were males. The mean age was 36 and the mean BMI was 48.5 Kg/m². The overall prevalence of H. pylori was 28.9% (24% of males and 29% of females).

Conclusion:

The prevalence of H. pylori infection in patients awaiting bariatric surgery remains similar to this reported in non-obese and healthy individuals. The correlation of H. pylori infection with obesity and morbid obesity remains unclear. A large population study is needed to evaluate this correlation. Review of the literature will be presented.

P59. EFFECTS OF BARIATRIC SURGERY ON SLEEP DISORDERED BREATHING IN MORBID OBESITY. Kimberley Chan, MD, Christine Ren, MD, George Fielding, MD, New York University, New York, NY.

Background:

Sleep Disordered Breathing (SDB) in the form of sleep apnea or hypoventilation is commonly found in obese patients. The effect of surgical weight loss in SDB has not been consistently evaluated. A prospective evaluation of SDB in this population was performed. We hypothesized that surgical weight loss leads to improvement in SDB.

Methods:

Twenty-five subjects undergoing bariatric surgery (LAGB) were recruited from April 2003 to April 2005. Measurements included baseline, 6 and 12-month post-operative sleep study, BMI, quality of life (SF-36), leptin, ghrelin, pepsinogen, esophageal pH and manometry.

Results:

The preliminary data presented consists of a sub-group analysis of SDB in the first 14 patients. A total of 10 females and 4 males, ages 34-58 years with average BMI 46.44 kg/m² (range 37.2-66.5) were included. Mean sleep duration was 338 min (range 163-458), sleep efficiency 80% (53-92), Respiratory Disturbance Index (RDI) 30 (range 2-104), mean sleep SaO₂ 95% (range 92-98), mean lowest sleep SaO₂ 79% (range 61-95) and % sleep time with saturation \leq 90% 5 (range 0-40). RDI adversely affected physical health in males ($r=-0.96$, $p<0.05$). BMI correlated with low sleep SaO₂ and %sleep time with saturation \leq 90% ($r=-0.53$, $r=0.58$, $p<0.05$). This effect was more pronounced in women ($r=-0.75$, $r=0.70$). BMI had no correlation with RDI, SF-36 or wake SaO₂.

Conclusion:

Despite no significant correlation between obesity and RDI, nocturnal hypoventilation correlated with obesity and was more pronounced in women. It remains to be seen whether this is related to leptin levels and if surgical weight loss will improve this form of SDB.

P60. A COMPREHENSIVE CASE MANAGEMENT TOOL FOR THE MANAGEMENT OF GASTRIC BYPASS SURGERY PATIENTS. Garry Welch, PhD, Cheryl Wesolowski, RD, Bernadette Piepul, RN, Jennifer Frederici, MA, Richard Kedziora, MBA, Baystate Medical Center, Springfield, MA.

Background:

Case management systems are used to enhance use of evidence-based practice guidelines and foster patient self-management but have not yet been applied to gastric bypass surgery. We developed a case management tool built from an existing Java Oracle application for diabetes. Case management systems typically involve computerized databases and patient registries, systematic tracking for laboratory results and clinical findings using evidence based recommendations, alerts and decision support, reminders, and documentation of patient goals, treatment plan, and education activities.

Methods:

Interviews were conducted with experienced team clinicians to create content, algorithms, and alerts for salient clinical areas. Clinical literature was used to determine lab value cut-offs.

Results:

Weight change (BMI, % excess weight), vitamin and mineral deficiencies, anemia, metabolic syndrome, sleep apnea, GERD, arthritis, asthma, and post-surgical complications were included, some assessed by lab or clinical data and some by automated telephone survey of questionnaires. Psychosocial and self management measures include: (i) target lifestyle behaviors; (ii) emotional distress related to lifestyle adjustment; (iii) weight related symptoms: (iv) depression; (v) alcohol abuse; (vi) smoking; (vii) hunger; (viii) pain; (ix) social support; (x) health rating; (xi) benefits of weight loss. Algorithms for psychosocial and self management alerts were developed. Data feeds from wireless home monitoring of weight, blood pressure, and blood glucose devices will capture daily patient clinical status and functioning over time

Conclusion:

We adapted the technological framework of a diabetes case management tool and developed content, clinical algorithms, and new patient report measures as necessary to comprehensively track patient functioning after gastric bypass surgery.

P61. ARE SERUM METABOLIC VALUES RELIABLE IN DETECTING ABNORMALITIES IN SKELETAL AND MUSCLE MASS IN PATIENTS UNDERGOING GASTRIC BYPASS? Dimitrios Stefanidis, MD, PhD, Timothy S. Kuwada, MD, Yuri W. Novitsky, MD, Zerey Marc, MD, James M. Coumas, MD, Keith S. Gersin, MD, Todd B. Heniford, MD, Ron F. Sing, MD, Carolinas Medical Center, Charlotte, NC.

Background:

Serum metabolic markers are commonly used in gastric bypass patients to detect skeletal and muscle mass loss. Our objective was to determine the utility of serum calcium, parathyroid hormone (PTH) and albumin in detecting abnormalities in bone mineral density (BMD) and lean body mass (LBM) in gastric bypass patients.

Methods:

Review of prospectively collected data on 23 patients awaiting surgery and 22 patients who had undergone gastric bypass matched for age, preoperative weight, and gender. Serum calcium, PTH and albumin levels were compared to BMD and LBM as measured by dual energy x-ray absorptiometry (DEXA). Pearson's correlation and T-test were used for statistical analysis; results are reported as mean \pm s.d.

Results:

At 17 \pm 7 months after gastric bypass, patients had lost 62 \pm 16% of their excess weight. Serum calcium and PTH did not correlate with BMD, nor did albumin with LBM, both pre and postoperatively. While the postoperative patients had a lower BMD and LBM compared to the preoperative group, no differences were noted in serum metabolic markers (table).

Conclusion:

Serum metabolic markers (calcium, PTH, and albumin) are inadequate in providing an accurate assessment of skeletal and muscle mass in the morbidly obese prior to, and following, gastric bypass surgery. DEXA exams in the pre and postoperative period are beneficial in accurately assessing skeletal and muscle mass changes in this patient population.

	Postoperative	Preoperative	P-value
Calcium (corrected) mg/dl	9.5 \pm 0.3	9.5 \pm 0.2	n.s.
PTH (pg/ml)	58 \pm 20	57 \pm 21	n.s.
Bone Mineral Density (g/cm ²)	1.24 \pm 0.08	1.39 \pm 0.12	<0.001
Albumin (g/dl)	3.8 \pm 0.4	3.9 \pm 0.2	n.s.
Lean Body Mass (kg)	47.8 \pm 10.6	53.8 \pm 7.9	<0.05

P62. ENDOSCOPIC SCLEROTHERAPY OF DILATED GASTRO-JEJUNOSTOMY AS AN ALTERNATIVE TREATMENT FOR PATIENTS WITH WEIGHT REGAIN. Sergio J. Bardaro, MD, Dennis Hong, MD, Laura July, MD, Jay Jan, MD, Emma Patterson, MD, Legacy Health System, Portland, OR.

Background:

Gastric bypass is a highly effective bariatric operation, but failures may occur. Some patients (10-20%) may present inadequate weight loss or weight regain after a few years, and dilatation of the gastro-jejunal anastomosis is one of the explanations for this phenomenon, although the data is sparse. Endoscopic injection of a sclerosing agent in the muscular layer has been reported to produce a stricture in those patients, which was a desired outcome in the circumstance of a dilated gastro-jejunal anastomosis.

Methods:

After informed consent, endoscopic sclerotherapy of dilated gastro-jejunostomy were performed in 3 patients with weight regain after adequate weight loss. Six intramuscular injections of 1 ml of 5% sodium morrhuate were placed circumferentially around the dilated gastro-jejunostomy in order to achieve a diameter of 10 - 12 mm. Weight loss was recorded at 2 months after the procedure.

Results:

One patient experienced pain immediately after the injections that quickly resolved. No dysphagia was reported. All three patients reported a subjective reduction in hunger and volume intake and initially resumed their weight loss (3,7 and 12 lbs). One patient underwent a subsequent endoscopy which confirmed a reduction in the anastomotic diameter. However, two patients began to regain weight (6 and 18 lbs) at 3 and 10 months respectively.

Conclusion:

Endoscopic sclerotherapy of a dilated gastro-jejunostomy is experimental and may be performed with minimal morbidity. However, the diameter of the anastomosis may not be responsible for weight regain in this group of patients.

P63. PREDICTORS OF WOUND INFECTION AFTER ROUX-Y GASTRIC BYPASS. Timothy L. Barnes, MPH, Sarah Boslaugh, PhD, J. Chris Eagon, MD, Washington University, St. Louis, MO.

Background:

Wound infection (WI) is less common after laparoscopic compared to open gastric bypass (GBP). Other WI predictors are less clearly defined. We aimed to assess preoperative risk factors for WI after GBP.

Methods:

We analyzed prospectively collected data on 906 consecutive patients undergoing GBP at our institution between July 1997 and October 2005. There were 105 documented WI (11.6%). Clinical characteristics were compared using logistic regression analysis.

Results:

Wound infections occurred in 5.7% of laparoscopic, 15% of revisional, and 21% of open GBP. Univariate analysis showed that WI was associated with increased preop weight, BMI, open approach, CAD, and sleep apnea. Stepwise logistic regression showed that WI was best predicted by a model including lap/open approach, BMI, age, and CAD. Sex, race, diabetes, HTN, and revisional surgery were not predictive of WI. WI was associated with other postoperative complications including hernia, DVT, and subphrenic abscess. Univariate analysis of weight loss during the first year showed WI was associated with less weight loss at 6 months and 1 year, but multivariate analysis showed that BMI was the only significant predictor of weight loss at these time points.

Conclusion:

Laparoscopy decreases WI risk. Increased age, BMI, and cardiovascular disease significantly increase WI risk. WI does not impact weight loss.

P64. COST ANALYSIS OF A LAPAROSCOPIC GASTRIC BYPASS PRACTICE UTILIZING CURRENT MEDICARE REIMBURSEMENT AND PRACTICE COSTS. Atul K. Madan, MD, Jill E. Powelson, MD, David S. Tichansky, MD, University of Tennessee Health Science Center, Memphis, TN.

Background:

Laparoscopic gastric bypass has been assigned a procedure code as well as a relative value unit amount by Medicare. Unfortunately, the payment by Medicare may be low. Thus, this investigation performs a cost analysis of a practice dedicated to laparoscopic gastric bypass utilizing Medicare reimbursement and practice cost. Our hypothesis was that a bariatric practice would have a difficult time surviving with current Medicare reimbursement.

Methods:

Cost analysis was performed of a hypothetical bariatric practice (one surgeon, one dietician, one office manager, one receptionist, and one medical assistant). Number of cases was calculated for the calendar year 2005. Costs were taken from an actual bariatric practice. Abnormally high costs were substituted with standard costs. Malpractice (but not physician salary) was calculated into cost. Reimbursement was calculated utilizing Medicare fee schedule. All procedure fees, new patient visits, postoperative visits (after the 90 day global fee), and assumed annual visits from past patients (3 years) comprised total reimbursement.

Results:

292 scheduled laparoscopic cases could be performed. Reimbursement was \$516,158 with a majority coming from procedure fees (\$407,063). Practice cost was \$444,592 with majority for clinic staff (\$207,065) and malpractice (\$55,150). Net difference of \$71,566 was left to pay the bariatric surgeon salary.

Conclusion:

Bariatric surgeons would be paid extremely low in a theoretical bariatric practice if Medicare was the sole insurance company. Low reimbursement of Medicare for laparoscopic gastric bypass threatens the financial viability of a bariatric surgery practice. With the climbing cost of malpractice and decrease in Medicare reimbursement, Medicare recipients may see a decrease in bariatric surgeons offering them service.

P65. ROBOTIC GASTRIC BANDING (RBG). Abdullah D. Aldahian, Mohammad Alegaly, Saleh Alsalamah, KSU-KKUH, Riyadh, Saudi Arabia.

Background:

Laparoscopic gastric banding is a common procedure performed in King Khalid University Hospital. Recently, robotic surgery was introduced with limited application. The reported technique of RBG is partially robotic. In the reported technique, the operation is done by the Davinci Robot.

Methods:

The procedure was done in 12 patients.

Results:

The mean operative time was 64 minutes, with mean BMI of 46. The mean postoperative stay was 1 day. The *pars flacida* technique was used and completed robotically.

Conclusion:

Robotic gastric banding is a safe procedure and can be an initial step for robotic gastric bypass.

P66. TREATMENT OF SMALL BOWEL OBSTRUCTION AFTER GASTRIC BYPASS BY PERCUTANEOUS GASTRIC DRAINAGE. Nahid Hamoui, MD, Peter F. Crookes, MD, Howard Kaufman, MD, University of Southern California, Los Angeles, CA.

Background:

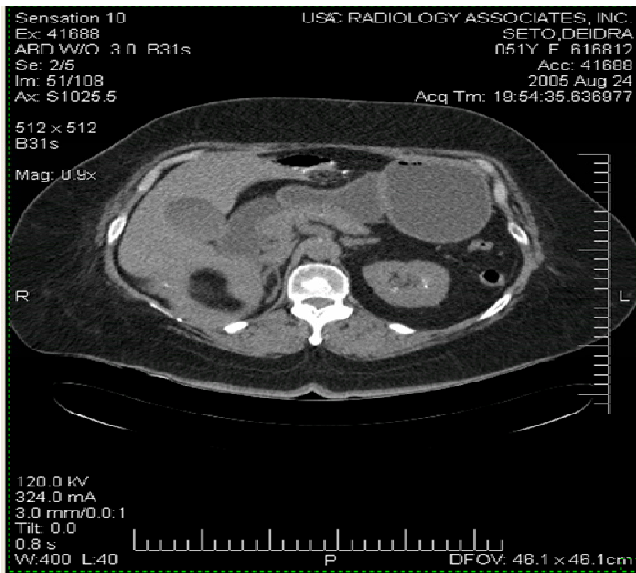
Small bowel obstruction (SBO) is a known complication of laparoscopic gastric bypass (GBP) operations, with a reported incidence of 0.6-10.3%. In many cases this has traditionally required operative treatment. We report a case of a postoperative closed loop SBO of the gastric remnant and biliopancreatic limb which was successfully treated by percutaneous placement of a pigtail catheter into the defunctionalized stomach.

Methods:

Case Report

Results:

A 52 year old woman, BMI 41, underwent an uneventful laparoscopic antecolic RNY GBP with a stapled jejunio-jejunostomy and was discharged home on POD 2. She presented with nausea, vomiting and abdominal pain 19 days later. CT scan showed a dilated gastric remnant and proximal small bowel, consistent with obstruction at the jejunio-jejunostomy but with a non-obstructed Roux limb (Figure 1). A pigtail catheter was placed under CT guidance into the gastric remnant with resolution of symptoms. One month later a contrast study (Figure 2) through the catheter showed no evidence of obstruction, and the catheter was removed, with no recurrence of symptoms.



Conclusion:

SBO of the biliopancreatic limb following GBP differs from conventional forms of SBO in that it cannot be diagnosed by plain films and cannot be decompressed by a nasogastric tube. The gastric remnant is, however, readily accessible to percutaneous drainage, allowing time for non-operative resolution of the obstruction. This case report suggests that selected patients with biliopancreatic limb obstruction following RNY GBP may be treated with appropriate non-operative therapy.

P67. THE POSITIVE PREDICTIVE VALUE OF POST-OPERATIVE TACHYCARDIA IN LAPAROSCOPIC GASTRIC BYPASS. Kelly D. Nolan, MD, Eugene S. Cho, MD, James D. Rifkenberg, MD, Franciscan Health Systems, Tacoma, WA.

Background:

Post-operative complications including bowel obstruction and gastrointestinal leak are difficult to diagnose, especially for surgeons new to bariatric surgery. Early in the learning curve, these complications are more common, making prompt recognition and management even more imperative for those with the least experience. As physical examination and radiographic studies are unreliable, tachycardia and respiratory distress are suggested clinical indicators for urgent re-exploration in this population. We proposed to identify the positive predictive value of severe (>120 beats per minute) tachycardia in the diagnosis of bowel obstruction and leak.

Methods:

We reviewed retrospectively 86 patients who underwent laparoscopic Roux-en-Y gastric bypass by two surgeons at a single institution between April 2002 and November 2005. Extracted data included postoperative symptoms, vital signs including severe tachycardia (>120), radiographic studies, and complications.

Results:

In our series, there were 9 (10.5%) leaks, and 5 (5.8%) bowel obstructions. Severe tachycardia was present in 10 (71.4%) of those with leak or obstruction, and 2 (2.8%) of those without, with a positive predictive value of 83.3%, and a negative predictive value of 94.6%. For leaks alone, the positive and negative predictive values were 66.7% and 98.6% respectively, with a sensitivity of 88.9% and specificity of 94.8%.

Conclusion:

The rate of anastomotic leak is clearly higher for surgeons early in the learning curve despite extensive non-bariatric laparoscopic experience. Severe tachycardia during the post-operative period is a strong but not exclusive predictor, signified a problem requiring urgent surgical intervention 83.3% of the time, but only 66.7% of the time was that problem an anastomotic leak.

P68. PREVENTING STAPLE LINE ACUTE LEAKS AND BLEEDING WITH SURGISIS SLR - AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGBP). Ricardo Cohen, MD, Jose S. Pinheiro, MD, Jose L. Correa, MD, Carlos A. Schiavon, MD, Hospital Sao Camilo, Sao Paulo, Brazil.

Background:

Staple-line failures can lead to complications such as leaks and bleeding. Leaks may cause life-threatening sepsis in the immediate postoperative period or delayed presentations with fistulas, with high mortality. Survivors have slow and costly recovery, some with lifelong consequences. The most common cause for GI/abdominal hemorrhage after LRYGBP is bleeding at staple lines. It's generally of less consequence, but can lead to the need of transfusion or surgical revision. Any device, technique or substance that could improve integrity of staple lines is of great benefit. This study examined the use of Surgisis SLR™ (Cook, Bloomington, IN, USA), a biodegradable membrane, in decreasing staple line complications.

Methods:

113 consecutive patients undergoing LRYGBP had Surgisis used for stapled creation of the gastric pouch. It was placed on 45 and 60 mm long EndoGia staplers (US Surgical). Ease of use, operative complications, staple line bleeding and postoperative leak rate were recorded.

Results:

Mean age was 42 (18-71) and mean BMI was 44.8 (36-68). There were no operative complications, no added OR time (mean of 45 min), minimal bleeding, and no stapler misfiring, adding only 0.8mm to tissue thickness. Application of the buttressing material ensured an easier and safer manipulation of the gastric pouch. No acute staple line leak was detected. Mean hospital stay was 24 hours.

Conclusion:

Surgisis was easy and safe to use, although experience is desirable for the scrub nurse and surgeon. It did not lead to stapler malfunctioning or added excessive tissue thickness. It's a precious tool to avoid potential fatal and disturbing complications including acute leak and extraluminal bleeding.

P69. OUTCOME COMPARISONS OF HAND ASSISTED VERSUS LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS. Mohammed Hassan, MD¹, George Kerlakain, MD¹, Trace Curry, MD², Amy Engel, MA³, ¹Good Samaritan Hospital, Cincinnati, OH, ²Deaconess Hospital, Cincinnati, OH, ³Hatton Research, Cincinnati, OH.

Background:

Previous studies compared open versus hand-assisted and open versus total laparoscopic roux-en-Y gastric bypass (RYGBP). We compared hand-assisted and total laparoscopic RYGBP surgery at two institutions by two surgeons, each specializing in one technique.

Methods:

RYGBP operations (N=280) were evaluated from January 1, 2004 to December 31, 2004. Comparisons between the hand assist (N=149) and laparoscopic (N=131) approach were determined using t-test and Chi-square analysis.

Results:

Patients' average age was 43.7 and 84% (234/280) of the patients were female. The average BMI was 48.9. There was no significant difference between hand assisted and laparoscopic patients in age, sex, BMI prior to surgery, or operation time. There were significantly more diabetic and hypertensive hand assisted patients than laparoscopic patients (28% to 8%, p<0.001; 48% to 15%, p<0.001), respectively. There was no significant difference in mortality rate between the hand assisted (2/149, 1.3%) and laparoscopic (1/131, 0.8%) approaches. There were also no significant differences in leaks, PE, DVT, wound infection, bowel obstruction, incisional hernia, fistula, persistent vomiting, and required re-operation between the procedures. There was a significant difference in length of stay, with an average of 5.1 ± 9.0 days for hand assisted and 2.8 ± 1.5 days for laparoscopic (p=0.003), and hemorrhage, that occurred in 1/149 (0.7%) of hand assist patients and 9/131 (6.9%) of laparoscopic patients (p=0.007). BMI and BMI reduction at six months post op was similar in hand assisted and laparoscopic patients (37.2 and 34.7; 11.2 and 12.7), respectively.

Conclusion:

Overall, both procedures offer similar results and are valid approaches to weight reduction surgery.

P70. THE REPORT OF LAPAROSCOPIC TOTAL GASTRIC VERTICAL PLICATION IN MORBID OBESITY IN IRAN.

Mohammad Talebpour, Moossa Zargar, Bazman Sa`adat Amoli, Sina Hospital Tehran University, Tehran, Pakistan.

Background:

This study introduce a new technique "Total Gastric Vertical Plication" (TGVP) in decreasing gastric volume with the least risk of complication and the same result of weight loss without any extraordinary cost especially in third world countries.

Methods:

Patients are placed in supine position. Trocars (three 5 mm and one 10 mm) inserted based on ergonomic assessment. After release of the greater curvature, a vertical plication was performed with continuous 00 nylon sutures from the fundus to 3 cm proximal to the pylorus. The distance between the stitches and the lesser curvature and between each stitch was 2 cm, all of them extra mucosal. The volume of stomach after this procedure is 100 cc, but half of it is effective due to painful muscular movement.

Results:

In 42 middle aged (35 , SEM=2.4) cases; mostly female (F/M=31/11) and with average BMI=46 (36-51) was performed. The mean Excess Weight Loss (EWL) was 21.4% after one month, 55% after 6 months, 61% after 12 months and 62.3% after 24 months. The average time of follow up was 11 months. The mean operative time was 107 (75–152) minutes. All patients were discharged at an average of 24 hours after operation. Postoperative complications include permanent vomiting (1 case), liver hematoma with abscess and adhesions (2 cases), failure in 3 cases and asymptomatic hypercalciuria in one case.

Conclusion:

The percentage of EWL in this technique is comparable to others but EWL appears more rapidly.

P71. DECREASING THE INCIDENCE OF GASTROJEJUNAL ANASTOMOTIC STRICTURE AFTER ROUX-EN-Y GASTRIC BYPASS. Vincent W Vanek, MD , St. Elizabeth Health Center, Youngstown, OH.

Background:

This study compares the incidence of gastrojejunal anastomotic (GJ) stricture following Roux-en-Y gastric bypass (RYGBP) using two different techniques of anastomosis.

Methods:

Retrospective review comparing the incidence of GJ stricture that required endoscopic dilation in the first 163 patients who had a side-to-side GJ using a 21 mm circular stapler to the next 237 patients who had an end-to-side GJ using a 25 mm circular stapler.

Results:

The incidence of GJ stricture was significantly lower in patients in whom the 25 mm circular stapler was used (0.4% vs. 17%, $p < 0.001$). Patients who developed a GJ stricture had a higher percent of excess weight loss (% EWL) at each follow-up after surgery, although the difference was statistically significant only at the 6 week, 3 month, and 6 month follow-up periods. At the two years the difference in %EWL was low (74.4% vs. 72.8%, $p = 0.88$). Patients who had their GJ with the 21 mm circular stapler had a higher %EWL at each follow-up but the difference was statistically significant only at 6 and 12 months. At 18 months the difference in %EWL was again low (75.4% vs. 72.6%, $p = 0.51$).

Conclusion:

The incidence of GJ stricture after RYGBP is dependent on technique. The GJ can be performed with a very low rate of GJ stricture. However, decreasing GJ stricture rate can have an adverse effect on postoperative weight loss but the difference may not be clinically significant.

P72. RISK FACTORS FOR DEVELOPMENT OF INCISIONAL HERNIA FOLLOWING OPEN ROUX-EN-Y GASTRIC BYPASS. Vincent W. Vanek, MD, St. Elizabeth Health Center, Youngstown, OH.

Background:

This study analyzes the risk factors that predispose to incisional hernia following open Roux-en-Y gastric bypass (RYGBP).

Methods:

Retrospective review of the incisional hernia rate in 400 consecutive open RYGBP patients performed through an upper midline incision with running suture closure.

Results:

With a mean follow-up of 12.8 months, 14% of the patients developed an incisional hernia. Incisional hernia was present and repaired primarily without the use of mesh at the time of RYGBP in 4% of the patients. These patients had a significantly higher incidence of recurrent incisional hernia after RYGBP (33% vs. 14%, $p < 0.05$). Patients who developed postoperative wound infection after RYGBP had a significantly higher incidence of incisional hernia (27% vs. 13%, $p < 0.05$). There was a significant difference in the frequency of incisional hernia between the two surgeons performing the RYGBP (18% vs. 11%, $p < 0.05$). Body Mass Index (BMI) of the patient did not correlate with the incidence of incisional hernia (13% for BMI > 50 vs. 16% for BMI < 50 , $p = 0.39$). After the first 317 RYGBP, the fascial closure suture was switched from a long acting absorbable suture to a non-absorbable suture. This seems to have decreased the incisional hernia rate but longer follow-up is needed to confirm this.

Conclusion:

The incidence of incisional hernia after RYGBP is high. Wound infection, preoperative incisional hernia, and surgeon technique all significantly affect the incidence of postoperative incisional hernia. The type of fascial closure suture may also play a role in the development of incisional hernia.

P73. INDICATIONS FOR LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG). Aniceto Baltasar, MD, Rafael Bou, MD, Marcelo Bengochea, MD, Carlos Serra, Alcoy Hospital, Alcoy, Spain.

Background:

LSG (Laparoscopic Sleeve Gastrectomy) was developed as a first stage of the more complex DS (Duodenal Switch) operation in the SO (super-obese) patients. More than 80% of the stomach is removed at the greater curvature and a gastric tube based on the lesser curvature is made. A 12 mm NG tube is used as a stent to size the gastric tube. The remaining gastric pouch is less than 50 cc in capacity

Methods:

38 MO (morbidly obese) patients had the LSG with 4 trocars of 5 mm, one 10 mm trocar for the camera and a working 12 mm. trocar. The stapled suture line was reinforced with a continuous polypropylene suture to prevent bleeding and leaks. The indications were weight loss but the patients operated belonged to several different clinical settings: I) SO – 7 patients, with BMI > 60 (61-74) as a first stage; II) severe medical conditions - 10 patients were 6 cirrhotic (discovered at the time of surgery), one with Crohn's disease and right hemicolectomy, a HIV+ patient, a patient with Ardystil syndrome (pulmonary-poison condition) and a patient with severe diarrhea on whom the DS was contraindicated; III) Low BMI (35-43) - 20 patients with at least a major co-morbidity and IV) Lap-band removal - 1 patient with a lap-band had a near normal BMI at the time conversion.

Results:

All weight loss are expressed in %EBMIL (%Excess BMI loss). A patient with a 74-BMI died as result of bleeding at the trocar site (< 400 cc) but required a laparotomy and developed MOF, mortality 2.3%. Type I patients: Mean 61 (57-62) at 8-35 months. Only one 61-BMI patient, so far, required the second stage operation when her BMI was 49 and she has a BMI of 35 at 9 months. Type II patients: Cirrhotic patients had 76 % EBML at 5 months, Crohn's: 66%, AIDS: 42% at 5 month, Ardystil syndrome: 82%. Type III patients: 68.5% at 3-27 months One patient bled at the trocar site and required re-Lap exploration and control; and Type IV patient had a BMI of 28 and she is now BMI 27. All these are early results. MO adolescent patients may be another good indication for the LSG. No secondary-effects occurred.

Conclusion:

LSG can become a good operation in 4 different MO settings and as an excellent alternative to gastric banding patients with low BMI, since no foreign material is used and no adjustments required.

P74. TWO STAGE DUODENAL SWITCH INTESTINAL BYPASS VS SLEEVE GASTRECTOMY. Simon Biron, MD, Picard Marceau, MD, Stefane Lebel, MD, Odette Lescelleur, MD, Christine Simard, MD, Laval Hospital, Quebec, Canada.

Background:

In rare circumstances, to lower the operative risk of a duodenal switch (DS), it may be helpful to limit the procedure to decrease its operative risk. Which part of the operation should be done first? In 892 consecutive DS, this situation was met on 20 occasions (2.2%).

Methods:

Charts were reviewed to analyze circumstances when it was decided to do the intestinal bypass alone (IB) in 16 patients and do a sleeve gastrectomy alone (SG) in 4 patients. Results were compared after 23 ± 17 (range: 3-65) months in terms of weight loss, improvement in co-morbidities and side effects.

Results:

IB patients were heavier, older and sicker. After an initial similar weight loss for both groups, SG patients started to regain weight, so that within 3 years, 3 out of 4 SG patients had regained 21.4, 12 and 22 kg respectively. While among IB patients only 2 out of 16 had regained 2 and 7 kg respectively. Improvement in co-morbidities was greater for IB patients; side effects were limited to one patient with diarrhea. There were no clinical signs of peptic ulcer and medication consisted in vitamins and ulcer prevention.

Conclusion:

In DS both the intestinal switch and the sleeve gastrectomy produce the same early weight loss. However after 3 years, 3 out of 4 SG patients did not maintain their weight loss. Considering the greater efficiency of intestinal switch vs gastrectomy on both long-term weight loss and improved co-morbidities, where only part of the DS is chosen, preference should be given to intestinal switch.

	IB				SG			
	n	Cured	Improved	Unchanged	n	Cured	Improved	Unchanged
DIABETES	12	6	6		1	1		
DYSLIPIDEMIA	9	8	1		1			1
HTA	15	2	5	8	2		1	1
APNEA	11	4	5	2	2		1	1

P75. GASTROTOMY FOR ERCP IN GASTRIC BYPASS PATIENTS COMMONLY REVEALS INTERNAL HERNIAS. Howard M. Lederer, MD, Oliver W. Cass, MD, Jessica M. Gutierrez, MD, Hennepin County Medical Center, Minneapolis, MN.

Background:

Endoscopic cholangio-pancreatography (ERCP) can be performed via gastrotomy in patients who have had Roux-en-Y gastric bypass(RYGBP). Internal hernias after RYGBP are a described phenomenon with a variable incidence.

Methods:

Eleven patients (ten female) with remote RYGBP had exploratory laparoscopy/laparotomy and gastrotomy in order to perform an ERCP between November 2004 through November 2005 at our institution. Pre-procedure diagnoses were: pancreatitis (five), sphincter of Oddi dysfunction (three) and cholangitis (three).

Results:

Eleven patients successfully underwent ERCP via a gastrotomy (nine via laparoscopy and two open). ERCP findings were: biliary sphincter dysfunction (five), papillary stenosis (two), pancreatic sphincter dysfunction (two) and normal cholangiogram (two). Surgical findings included: internal hernias (six patients with thirteen hernias), and cholelithiasis requiring cholecystectomy (two). There were no re-operations or major complications. Minor complications included: one gastrostomy tube prematurely displaced (no consequences), two patients with skin irritation around the gastrostomy site, one patient had the gastrostomy tube removed due to irritation and then had recurrent pancreatitis requiring later percutaneous gastric access for ERCP via the previous surgically created gastropexy site.

Conclusion:

Exploratory laparoscopy/laparotomy and gastrotomy were successfully used in all patients to achieve ERCP access. Six patients had thirteen associated internal hernias that may have contributed to their gastrointestinal symptoms. This procedure should be performed by experienced bariatric surgeons as additional findings, such as internal hernias are quite common.

P76. A METHOD TO HELP PREVENT BLEEDING FROM THE GASTROJEJUNOSTOMY IN ROUX-EN-Y GASTRIC BYPASS. William P. Homan, MD, Philip Weber, MD, Carl Weber, MD, New York Bariatrics, White Plains, NY.

Background:

Postoperative bleeding from the gastrojejunostomy has been a continuing problem for surgeons performing the Roux-en-Y gastric bypass. Rates have varied in different series, but may range from 1% to 5%.

We, too, had been troubled by bleeding from the gastrojejunostomy. A change in technique, however, has eliminated this problem in our last 205 cases.

Methods:

We have performed laparoscopic or open Roux-en-Y gastric bypass since 2000 using a circular stapling device for performing the gastrojejunal anastomosis. Since early 2004 we have meticulously interrupted any visible vessel on the surface of the stomach pouch that may enter the circular anastomosis. This has been done by suture ligation or by division of the vessels with the harmonic scalpel.

Results:

Before instituting this technique we had 5/330 (1.5%) cases of GI bleeding from the gastrojejunal anastomosis requiring transfusion and documented by upper GI endoscopy. After interruption of visible blood vessels to the anastomosis we have had no significant bleeding in 205 patients (0.0%).

Conclusion:

Although our series of patients suffers from the obvious defects of having historical controls and numbers too small to reach statistical significance ($p < 0.1$), we believe that interrupting visible branches of the left gastric artery that approach the gastroenterostomy is a valuable technique to lower the incidence of postoperative bleeding from the gastroenterostomy in the Roux-en-Y gastric bypass.

**P77. EFFECTS OF BARIATRIC SURGERY ON MARITAL SATISFACTION. Kristina M Cooper, PhD¹, Marcia Wells, MC²,
¹Banner Good Samaritan Bariatric Program, ²Arizona Bariatric Surgeons**

Background:

Marital satisfaction is an important aspect of quality of life. Little information is available regarding the marital satisfaction of persons after gastric bypass surgery. Anecdotal data suggest this to be a complex issue. Low self-esteem, depression, and poor body image are common problems in the obese population. All of these can affect marital satisfaction. For most individuals these issues improve after surgery. This can have both positive and negative effects on a marriage. We are continuing to collect data to learn more about marital satisfaction after roux-en-y gastric bypass surgery

Methods:

Subjects were recruited from the practice, Arizona Bariatric Surgery. It is a requirement in this practice for all patients to attend a pre-surgical psycho-educational group. At each of these groups, a request was made for volunteers interested in participating in a study looking at marital satisfaction and gastric bypass surgery. Subjects were given the Blum and Mehrabian (1999) Comprehensive Marital Satisfaction Scale (CMSS) the week before surgery, and at 6 weeks, 3 months, 6 months and one year post surgery.

Results:

Data collection is still in process. So far 69% of patients have shown an increase in marital satisfaction in the first 3 months after surgery.

Conclusion:

Preliminary results show that for the majority of patients gastric bypass surgery has a positive effect on their marriages. This is consistent with the overall improvement in quality of life reported after bariatric surgery.

P78. LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) COMPLICATIONS: PREVENTION AND TREATMENT. Claudia A. Refi, MD, Carlos C. Casalnuovo, MD, Ezequiel Ochoa, MD, Marco More, MD, Mar-a T. Panzitta, PHD, Centro de Cirugía de la Obesidad, Buenos Aires, Argentina

Background:

LAGB seems to be good and safe, nevertheless, complications may occur. Standards and strategies in prevention and treatment should be defined.

Methods:

From January 1998-October 2005 complications of 290 LAGB were analyzed. Mean-preop. BMI: 49.8(35-94.7). BMI= \geq 50: 43.3%, BMI= \geq 60: 15%.

Results:

Intraoperative complications: 5 (1.7%) bleeding trocar-wounds, were treated with electrocautery/suture; 1 abdominal esophageal-tear (4cm) due to calibrating-balloon inflated in wrong place by anesthesiologist, successfully sutured laparoscopically.

Early-postoperative complications: 2 hemoperitoneum needed re-laparoscopy (bleeding trocar wounds and no cause found respectively); 1 acute pulmonary edema (72hrs. ventilatory-support); 7(2.4%) port-infection (7-15 days) resolved with early port-removal and tube-end placed (re-laparoscopy) far from septic area with/without new port-implant. Twice the tube was placed into-abdomen; 4 (1.4%) post-operative aphagia resolved only with endoscopy; 1 re-operation for gastro-esophageal junction perforation unrecognized intraoperatively with band removal.

Late-complications: 4 (1.4%) port-decubitus resolved like port-infection; 20 (6.9%) tube-connection-port leakage (16 repaired); 14 (4.8%) slippage (4/45 months), 9 re-laparoscopically reduced or re-banded (2 acute, 1 posterior, 1 re-slippage, 1 band removal); 2 re-banded for balloon-leakage; 6 (2.1%) erosion with band removal; 4 (1.7%) esophageal dilatation resolved with partial band deflation.

Total reoperation-rate for major complications, including 7port-decubitus-infections: 7.9% (23 patients), 92.1% by re-laparoscopy. No mortality.

Conclusion:

- LAGB is a safe procedure with low-rate complications.
- Most of reoperations can be performed by re-laparoscopy.
- Trocar-wound control to avoid unexpected hemorrhage.
- *Pars flaccida* technique decrease surgical-time, simpler dissection (superobese) and higher/stable band position, avoiding posterior-slippage.
- Stomach fixation to prevent anterior-slippage.
- Test balloon to recognize unexpected band-defects.
- Good alternative in port-infection with early switching tube-end to aseptic area.
- Tight fundoplication and infection could be related to band-erosion etiology.

P79. INCIDENCE AND CHARACTERISTICS OF PETERSEN'S HERNIA FOLLOWING GASTRIC BYPASS SURGERY. Elliot R. Goodman, MD, Laurie A. Focacci, PA-C, I. Michael Leitman, MD, James C. Rosser, MD, Brian R. Davis, MD, Beth Israel Medical Center, New York, NY.

Background:

Petersen's hernia (PH) is an uncommon but potentially disastrous complication following gastric bypass surgery (GBP). Delayed diagnosis may lead to bowel compromise. Our objective was to identify the incidence and characteristics of PH after GBP.

Methods:

A retrospective review was performed of one surgeon's experience with PH following GBP (antegastric retrocolic). Data included weight loss and change in BMI from gastric bypass to hernia, time interval between gastric bypass and hernia, presenting features, intraoperative findings and outcome.

Results:

Of 796 patients, 17 developed a PH (2.1%). The same surgeon operated on an additional three patients for whom he did not perform the initial gastric bypass. Time to presentation for all 20 patients was 24.6 months (SD \pm 13.1, median 22 mos). Average weight loss was 143.1 lbs (SD \pm 55.3) and change in BMI was 22.2 kg/m² (SD \pm 9.4). There was no correlation between time to herniation or weight loss and severity of the hernia.

Type Hernia contents N = % patients

1 Biliopancreatic limb 3, 15%

2 Roux limb - no resection 6, 30%

3 Roux limb - limited resection 3, 15%

4 Roux limb and common channel - massive resection 8, 40%

Type 1 PH resulted in no bowel compromise. All other types led to varying degrees of mesenteric volvulus, ischemia, and resection.

Conclusion:

PH can be classified according to anatomic type and extent of mesenteric ischemia. Type 2,3 or 4 hernias are more ominous as they typically present with mesenteric ischemia or infarction.

P80. ROUTINE USE OF UPPER GI SERIES (UGI) ON POSTOPERATIVE DAY ONE REDUCES INCIDENCE OF SERIOUS COMPLICATIONS. Aviv Ben-Meir, MD, Dawn Miller, MA, John Marshall, MD, Karen Schulz, MSN, Helmut Schreiber, MD, Linda Patterson, MD, Indukumar Sonpal, MD, Cleveland Center for Bariatric Surgery, Saint Vincent Charity Hospital, Cleveland, OH.

Background:

In an effort to reduce hospital costs, some surgeons have abandoned routine UGI testing. Use of this test, however, may allow for the detection of potentially avoidable complications.

Methods:

We retrospectively reviewed a single surgeon's experience of 976 laparoscopic Roux-en-Y Gastric Bypasses (July 2002 to October 2005), noting any abnormal UGI results and subsequent changes to patient management.

Results:

Of 976 patients, 31 (3.2%) had abnormal UGI results. No leaks were identified radiographically; none were seen clinically. Fifteen of these patients had an asymptomatic distended bypassed stomach and were treated with ambulation, intravenous metaclopramide, suppositories and ambulation. Thirteen were discharged to home after radiographic resolution. The 2 remaining patients became symptomatic. Both patients were treated with tube gastrostomy without further sequelae. Nine patients demonstrated poor emptying of contrast from their pouch. Diet initiation was delayed until repeat UGI indicated normal emptying. Five patients had small bowel ileus

which resolved with activity and delay in initiation of diet. Two patients had inconsequential reflux of contrast into the biliary limb requiring no change in regimen.

Conclusion:

Modification of postoperative regimens for 29 of 31 patients with abnormal UGI may have prevented hospital readmissions, and potentially reduced the risk of leak at the gastrojejunostomy or the bypassed stomach staple line. UGI is a useful diagnostic tool to alert surgeons to needed modifications of standard pathways.

P81. AN OUTPATIENT LAPAROSCOPIC ADJUSTABLE GASTRIC BAND (LAP-BAND®) PROGRAM CAN BE SAFELY DEVELOPED WITHOUT INPATIENT LAP-BAND® EXPERIENCE. Mark A. Fusco, MD¹, Donna Muscari, RN¹, Lynne Stoldt, RN²,
¹LifeShape Advanced Bariatrics of Florida, Melbourne, FL, ²Melbourne Same Day Surgery, Melbourne, FL.

Background:

Outpatient surgery has many potential advantages over inpatient surgery. Several authors have documented the ability to safely perform outpatient Lap-Band® procedures, but continue to recommend an extensive prior inpatient experience. In 2003, we developed a Lap-Band® practice in partnership with an outpatient surgery center. We report short term safety data for our first 100 patients.

Methods:

A prospectively collected database was retrospectively reviewed. Thirty day mortality, re-operation, readmission, ICU admission rates were evaluated. Length of stay (LOS) for patients readmitted and for the whole group was calculated.

Results:

Between June 2003 and April 2005, 100 Lap-Band® procedures were performed by a single surgeon utilizing the Inamed Lap-Band®. One surgery (patient #9) was performed as an inpatient for medical reasons. Beginning with patient #67, 18 of the remaining 33 surgeries were performed as inpatients for insurance reasons. All but one of these patients were discharged the following morning. The remaining 81 patients were discharged the day of surgery. For all 100 patients the mean age, weight, and BMI at operation was 45.4 (23-72), 110kg (71-201), and 45.4 (34.3-67.3) respectively. 85% were female. Follow-up at 6 weeks was 100%.

Mortality 0%

Reoperation 0%

Readmission 5%

LOS (patients readmitted) 3.5d

LOS (whole group) 0.2d

ICU admission 0%

Conclusion:

When properly constructed, a Lap-Band® program can be organized as an outpatient program from its inception with acceptably low short term mortality, morbidity, and hospital readmission rate.

P82. INTUSSUSCEPTION FOLLOWING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS SURGERY FOR MORBID OBESITY. Baiju C. Gohil, MD, Bethany C. Sacks, MD, Carol McCloskey, MD, George M. Eid, MD, Ramesh C. Ramanathan, MD, University of Pittsburgh Medical Center, Pittsburgh, PA.

Background:

Roux-en-Y gastric bypass has become one of the most common surgical treatments for morbid obesity. Small bowel obstruction (SBO) after this procedure is well reported. There have been reports of retrograde Roux limb or jejuno gastric intussusception and antiperistaltic jejuno-jejunal intussusception as a cause of SBO. However, to our knowledge, there have been no reports of isoperistaltic jejuno-jejunal intussusception distal to the Roux entero-enterostomy after laparoscopic Roux-en-Y gastric bypass (LRYGBP).

Methods:

We describe three adult patients who underwent LRYGBP anywhere from 10 to 16 months prior to presenting with abdominal complaints requiring operative intervention. All had lost at least 100 lbs. since their LRYGBP. Two of the patients had complaints of intermittent, crampy abdominal pain and nausea prior to reoperation with non-diagnostic abdominal CT scans, while one patient presented with severe, acute abdominal pain with vomiting whose abdominal CT scan revealed SBO secondary to intussusception.

Results:

Each patient underwent exploratory laparoscopy and in each case the small bowel intussusception was isoperistaltic and distal to the Roux entero-enterostomy. Each patient underwent laparoscopic reduction of the intussusception without resection or revision. All of the

patients had an uneventful post-operative course with complete resolution of symptoms. It has been 3 months for one of the patients and 10 months for the other 2 since their operation and to this point, none have had a recurrence.

Conclusion:

Intussusception is a rare cause of SBO in patients who have undergone LRYGBP. Patients may present with vague abdominal complaints and have non-diagnostic workups. The cause of intussusception following LRYGBP is yet unknown. However, it is possible that after a patient has lost significant weight, there is altered motility of the small bowel or laxity of the small bowel mesentery, which may predispose to intussusception.

P83. BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH WITH OR WITHOUT GASTRIC RESECTION FOR FAILED GASTRIC BANDING. Philippe Topart, MD¹, Daniel Krawczykowski, MD², ¹Centre Hospitalier Universitaire de Brest, Brest, France, ²Centre Hospitalier de Vitry le Francois, Marne, France

Background:

Adjustable gastric banding is a restrictive bariatric surgery that may lead to reoperation in about 10% of the cases for insufficient weight loss or complications. Malabsorptive procedures may provide an alternative solution.

Methods:

Between February 2002 and September 2005 44 patients had revisional surgery after adjustable gastric band and were offered biliopancreatic diversion with duodenal switch (DS). Two different approaches were used according to the institution. 16 patients had their band removed prior to (5) or at the time (11) of the DS including sleeve gastrectomy (groups 1 and 2). 28 (groups 3 and 4) had DS without gastric resection nor band removal with subsequent band removal 11.6 ± 7.0 months for 16 of them (group 3), 2 in this group had a sleeve gastrectomy.

Results:

Initial BMI for the 44 patients was 48.2 ± 6.8 and the lowest BMI achieved with the gastric band was 37.8 ± 7.4 during 33.4 ± 18 months of band effectiveness. Postoperative results between groups with or without gastric resection (1+2 vs 3+4) in the table below.

Conclusion:

After DS BMI decreased below the lowest figure achieved by the gastric band. The weight loss was greater after one stage procedure. In the 2 stage approach the band had to be subsequently removed in most cases for complication or intolerance. DS without band removal does not appear to be a valid alternative as a revisional procedure.

P84.A NEW GASTRIC STIMULATION DEVICE FOR TREATMENT OF OBESE TYPE 2 DIABETIC PATIENTS: INTERIM RESULTS OF A EUROPEAN. Gerhard Prager, MD, B. Ludvik, A. Bohdjalian, K. Schindler, R. Weiner, Vienna Medical School, Vienna, Austria

Background:

Bariatric surgery has shown to induce improvement in morbidly obese type 2 diabetic patients. These procedures carry surgical risks and may alter nutrient absorption, patient lifestyle and quality of life. The TANTALUS™ System (MetaCure N.V.), a minimally invasive gastric stimulation modality, may achieve improved glucose homeostasis and weight loss, without interfering with physiological ingestion.

Methods:

In a prospective, 12 month study, 22 obese type 2 diabetic patients with a BMI of 33.3 to 49.7 kg/m² treated with insulin and/or oral medications were implanted laparoscopically with the TANTALUS™ System (pulse generator and three bipolar leads). The device automatically detects food intake and delivers electrical impulses synchronized with the natural rhythm of the stomach to enhance antral contractions. Interim results of the first 16 patients after 14 weeks of therapy are reported.

Results:

Mean EWL decreased by 13.0±2.5% (mean ± SEM). This compares with the EWL of 17.7 ± 4.0% at 14 weeks and 26.8 ± 7.9% at one year of therapy seen in a cohort of non-diabetic obese patients previously reported. Fasting glucose decreased from 189.1±18.0 to 143.0±11.7mg/dL while HbA1c was reduced from 8.2±0.2% to 7.4±0.3% (p<0.05). Initial BMI was not correlated with weight loss or glycemic improvement.

Conclusion:

The TANTALUS™ system can potentially improve glucose homeostasis while inducing weight loss across a range of BMI levels. We hypothesize that the mechanism of action includes an increase in insulin sensitivity through weight loss, though a direct, weight loss independent effect on glycemia may be at play and is the focus of ongoing research.

P85. ULCER DISEASE AFTER GASTRIC BYPASS SURGERY. Ramsey M. Dallal, MD, FACS, Albert Einstein Medical Center, Lower Gwynedd, PA.

Background:

The mechanism and incidence of ulcer disease after gastric bypass surgery is poorly understood.

Methods:

Outcomes of 201 consecutive gastric bypass operations were prospectively analyzed for complications. All procedures were performed using a linear stapled anastomosis and absorbable suture. All patients were placed on 3 months of proton pump prophylaxis and told to completely abstain from NSAIDs and tobacco.

Results:

The incidence of ulcer disease was 3.5 percent (7 patients). One patient, the only smoker, presented with an acute perforation four months post-operatively. Three other patients presented with bleeding that required transfusion. The remaining three patients presented with severe pain, especially after eating. At the time of endoscopy, the ulcerations were always found on the Roux limb mucosa. Ulcerations were not associated with the staple line. All of these patients were successfully treated using chronic sucralfate therapy. Ulceration occurred an average of 7.4 months after surgery, although a bimodal distribution seemed evident with groups at 4 months and 12 months. Average length of follow-up in the entire cohort was 12 months. There were no pre-operative predictors of ulcer disease including BMI, age, sex or co-morbidities.

Conclusions:

Ulcer disease using the linear stapled technique occurs in 3.5% of patients with a possible bimodal period of presentation. Three separate mechanisms for presentation exist: bleeding, pain or perforation. Sucralfate is an effective treatment.

P86. INTUSSUSCEPTION AFTER GASTRIC BYPASS FOR MORBID OBESITY. Michael A Edwards, MD, Ronit Grinbaum, MD, James Ellsmere, MD, Daniel B Jones, MD, Benjamin E. Schneider, MD, Harvard Medical School, Boston, MA.

Background:

Small bowel obstruction (SBO) is a recognized complication of Roux-en-Y gastric bypass (RYGBP), most commonly caused by internal hernia. Intussusception occurs rarely in adults and accounts for 1-5% of all SBO. Intussusception is a rare cause of obstruction after RYGBP.

Methods:

We describe the clinical, radiographic presentation, and operative findings of a patient who developed jejuno-jejunal intussusception 4 years after an open RYGBP. This 33-year old woman presented with nausea, vomiting and abdominal pain. Vital signs were normal. Her abdomen was non-distended, tender, without signs of peritonitis. A CT scan revealed SBO secondary to intussusception.

Results:

Laparotomy revealed a retrograde intussusception at the jejuno-jejunostomy requiring resection. Pathology revealed an infarcted intussusceptum with no identifiable lead point. Her postoperative course was uneventful. Nine cases of intussusception after RYGBP have been reported. All occurred greater than 1-year post-operatively. Abdominal pain without peritonitis was the most common presentation. Axial CT had a diagnostic accuracy of 100%. All required surgical resection. Bowel ischemia or necrosis was present in 56% of patients and no lead points were identified.

Conclusion:

Intussusception after RYGBP is a rare and potentially fatal complication. Given the logarithmic growth in obesity surgery, intussusception after RYGBP must be considered in patients presenting with obstruction. Management algorithms should incorporate early radiological evaluation, bariatric surgery consultation and surgical intervention.

P87. GASTROJEJUNAL STRICTURE FORMATION AFTER LAPAROSCOPIC ROUX-Y GASTRIC BYPASS IS MINIMIZED WITH THE LINEAR-STAPLED TECHNIQUE. Kurt E. Roberts, MD¹, Robert L. Bell, MD¹, Andrew J. Duffy, MD¹, Joyce Kaufman¹, Kanayochukwu J. Aluka, MD², Terrence M. Fullum, MD², ¹Yale University School of Medicine, ²Howard University College of Medicine

Background:

Gastrojejunal strictures are a well-documented complication of laparoscopic gastric bypass (LGBP), with frequencies ranging from 3%

to 35%. Our linear-stapled technique, performed in two different institutions, has resulted in an extremely low frequency of gastrojejunal strictures.

Methods:

1071 LGBP were performed from August 2001 until August 2005. All gastrojejunostomies were constructed using a linear-stapled technique. Patient demographics, operative time, length of stay (LOS), complications and excess weight loss (EWL) were entered into a longitudinal, prospective database. Statistical analyses were performed to determine any risk factors for stricture formation and the effect of stricture formation on outcome.

Results:

Mean age was 40.8 years; 920 patients were female (86.2%); mean preoperative BMI was 50.1 kg/m². Mean operative time was 159 minutes (range 63-520 min). Mean LOS was 2.7 days. Mean 6 month EWL was 48.8%. Mean 12 month EWL was 59.9%. The complications observed were: 4 (0.4%) mortality, 7 (0.7%) strictures, 2 (0.2%) leaks, 26 (2.4%) marginal ulcers, 11 (1.0%) obstructions, 13 (1.1%) postoperative bleeding, 10 (0.9%) PE/DVT. Stricture subgroup analysis showed 6 (82.6%) females, mean preoperative BMI 49.1 kg/m² (p=0.50), mean operative time 182 min (p=0.28). Mean EWL at 6 and 12 month was 46.4% (p=0.78) and 63.1% (p=0.70), respectively. There was no statistically significant difference in stricture rate between the two institutions.

Conclusion:

Constructing the gastrojejunal anastomosis using a linear-stapled technique has resulted in an extremely low stricture rate, 0.7%, with a minimal incidence of other complications. Additionally, the linear-stapled technique leads to excellent excess weight loss in the hands of experienced surgeons.

P88. OPERATIVE SURGICAL COSTS OF BARIATRIC SURGERY. Eldo E. Frezza, MD, MBA, Khaled O Shebani, MD, Mitchell S. Wachtel, MD, Texas Tech University Health Sciences Center, Lubbock, TX.

Background:

We compared the operative costs of laparoscopic gastric bypass (LGBP) to those of laparoscopic gastric banding (LGB).

Methods:

Data from the Southwest region of the United States were used to derive cost estimates. Operative costs were summarized into three categories: 1) anesthesia professional charges; 2) operating room charges; 3) instrument charges.

Results:

Anesthesiologist charges accrue from the beginning of induction until the patient is received by the post-anesthesia recovery room. Their professional charges for LGB, \$1,400, are nine-tenths of those for LGBP, \$1,540. Operating room costs are proportionate to procedural duration. LGBP costs \$8320 and LGB costs \$5546. The cost of the band makes the disposable instrument costs for LGB: \$3,195, one and one-half times those for LGBP: \$1,901. The total operative costs for LGB, \$10,141, are over five-sixths those of LGBP, \$11,761, notwithstanding that LGB takes only two-thirds as long as LGBP.

Table 1 displays the charges and what fraction each cost category represents of operative costs.

	Laparoscopic gastric bypass	Laparoscopic gastric banding
Anesthesia costs	\$1,540, 13%	\$1,400, 14%
Operating room charges	\$8,320, 71%	\$5,546, 55%
Disposable instrument costs	\$1,901, 16%	\$3,195, 32%
Total	\$11,761, 100%	\$10,141, 100%

Conclusion:

Disposable instrument costs for LGB, as a fraction of total operative costs, are twice those of LGBP. Because the greatest potential price reductions due to technologic innovation and competition among vendors in this area, cost containment efforts as regards LGB should focus upon disposable instrument costs.

P89. PAIN OUTCOMES AND PREDICTORS OF PATIENT SATISFACTION WITH PAIN CARE IN A BARIATRIC SURGICAL POPULATION. Noel N. Williams, MD, Steven E. Raper, MD, Catherine Foster-Kilgarrieff, MSN, CRNP, Angela Votodian, MSN, CRNP, Kelley Smydra, MSN, CRNP, Andra Mariotti, BA, Julie Tabbutt, MSN, CRNP, Hospital of the University of Pennsylvania, Philadelphia, PA.

Background:

Significant gaps in bariatric research exist for patient-reported pain outcomes during hospitalization. While global ratings of satisfaction are often captured by post-discharge surveys, these provide little information about factors influencing satisfaction. A study was

conducted to elucidate patients' perceptions of pain experiences and identify predictors of satisfaction with pain care following weight loss surgery.

Methods:

At discharge, 56 patients completed the 13-item Brigham and Women's Postoperative Pain Patient Discharge Questionnaire (PPDQ), which measures pain intensity, satisfaction with care, pain relief and MD/RN concern, and helpfulness of information and pain medications. The majority used IV PCA immediately after surgery.

Results:

Mean age was 42.2 ± 8.8 years, majority female ($n=39$) and average LOS was 3.7 ± 1.9 days. "Very good or Excellent" pain control was achieved in 60% and 70% rated helpfulness of medications favorably. Satisfaction with pain relief was positively correlated with MD/RN concern ($r=.48$; $p < 0.001$) and inversely correlated with more expected pain ($r=-.49$; $p < 0.001$). Linear regression analysis revealed increased age, lower expected pain, and longer LOS were associated with better "General Satisfaction" ($p < 0.001$). Younger age, less perceived MD/RN concern and higher "worst pain" (mean 3.7 ± 1.2) predicted "Tendency Toward Dissatisfaction" ($p < 0.001$).

Conclusion:

Measurement of patients' perceptions of pain management using instruments such as the PPDQ, which is easy to use in clinical practice, plays a critical role in assessing the effectiveness of pain therapies. Greater patient satisfaction with pain care may be achieved by preventing gaps in analgesia, expressing concern and setting realistic expectations for pain relief.

P90. IS ISOLATED LAPAROSCOPIC SLEEVE GASTRECTOMY AN OPTION IN BARIATRIC SURGERY? Daniel R Krawczykowski, Medar Lecko, Centre Hospitalier Vitry Le François, Marne, France.

Background:

Biliopancreatic diversion with duodenal switch (BPD-DS) is the most efficient bariatric procedure in terms of sustained excess weight loss, but it carries operative morbidity and mortality. Laparoscopic sleeve gastrectomy (LSG) represents the restrictive component of BPD-DS and it has been performed isolated as a primary surgery in patients with a high BMI or at high surgical risk.

Methods:

From December 1st 2001 to October 31st 2005, we have performed 111 LSG. Within those 65 primary and isolated LSGs have been done in the frame of a two stage procedure proposed to all our patients scheduled for a BPD-DS.

Results:

For primary LSG there were no deaths but 4 patients presented with major complications: 1 stained-bile peritonitis (associated cholecystectomy), 3 gastric fistulas that resolved with protracted drainage, 3 other patients underwent a re-look laparoscopy either for fever, elevated white cell count or unexplained pain. At one year, mean drop in BMI was $13.4 (\pm SD 4.6)$ and average percentage of excess weight loss (%EWL) was 66.6 % (range 37.3 -117.1). At longer term, there is neither vomiting, nor major metabolic disorder.

So far, only 6 patients underwent an additional DS at an average of 12 months (9-22).

Conclusion:

Isolated LSG has been performed with success as a primary surgery to induce weight loss before a formal BPD-DS. At least at short term, it looks like some patients won't require further the DS. Isolated LSG should be considered as an option in bariatric field.

P91. LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING AND LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: COMPARISON OF WEIGHT LOSS AND COMPLICATIONS. Liam A. Haveran, DO, Joshua Felsher, MD, Vera Freeman, MD, Patrick McEnaney, MD, Donald R. Czerniach, MD, Richard A. Perugini, MD, Demetrius E.M. Litwin, MD, John J. Kelly, MD, University of Massachusetts Memorial Medical Center, Worcester, MA.

Background:

Laparoscopic Roux-en-Y gastric bypass (LRYGBP) remains the standard of surgical management for morbid obesity in terms of both weight loss and resolution of co-morbidities. More recently, laparoscopic adjustable gastric banding (LAGB) has been proposed as an alternative to LRYGBP, demonstrating similar outcomes with a lower risk profile.

Methods:

A retrospective analysis of prospectively acquired data was completed on all patients who underwent LRYGBP or LAGB by three surgeons at a single institution from October 2001 through December 2003. Patient preference and certain selection criteria determined the operation performed.

Results:

Over the 27-month period, 343 and 68 patients underwent LRYGBP and LAGB, respectively. Mean age was 42.7 +/- 9.8 and 45.6 +/- 10.2 years (p= 0.029) respectively. Mean preoperative BMI was 51.1 +/- 8.3 and 46.0 +/- 6.7 kg/m² (p< 0.0001). The LRYGBP group had a higher proportion of female patients (84.8% vs. 75%, p= 0.045) Excess weight loss (%EWL) was 49.0% for LRYGBP and 24.3% for LAGB 6 months postoperatively (p< 0.0001), 62.9% and 35.6% at 1 year (p< 0.0001), 68.1% and 44.3% at 2 years (p< 0.0001) and 61.6% and 44.1% at 3 years (p= 0.011). There were 43 major complications following LRYGBP (12.5%) vs. 5 after LAGB (7.4%) (p= 0.23).

Conclusion:

Patients who underwent LRYGBP achieved significantly greater short-term weight loss than seen following LAGB. At three years, the difference was narrowed, but still significant. The frequency of major postoperative complications was similar. Long-term follow-up is necessary in order to determine whether the efficacy of LAGB approaches that of LRYGBP.

P92. THE IMPACT OF INTRAOPERATIVE METOCLOPRIMIDE AS AN ANTIEMETIC IN GASTRIC BYPASS PATIENTS.

Douglas F. Hoover, RPh, Randal Baker, MD, Sectrum Health, Grand Rapids, MI.

Background:

Post-operative nausea and vomiting is a common complication resulting from surgery. No specific study has evaluated the impact of antiemetic use intraoperatively in gastric bypass surgery. This study aims to evaluate the impact of metoclopramide-containing intraoperative antiemetic regimens (MIAR) in gastric bypass patients.

Methods:

A retrospective review using patient's charts and anesthesia records was performed.

Patients were stratified into two groups, those who received a MIAR and those who did not. The use of post-operative antiemetics, and delays in discharge from hospital in each group were evaluated.

Results:

Of the 92 patients evaluated, 47 (51.1%) received MIAR and 45 (48.9%) did not. The dose of metoclopramide in the MIAR group was 10mg administered intravenously. The use of post-operative antiemetics was identified in 11 of 47 (23%) patients in the MIAR group, and in 37 of 45 (82%) patients in the non-MIAR group. There were zero delays in discharge in the MIAR group, but 5 of 45 (11.1%) patients experienced a 24-72 hour delay in discharge in the non-MIAR group.

Conclusion:

In this retrospective study, the use of metoclopramide intraoperatively during gastric bypass surgery appears to reduce the additional use of post-operative antiemetics and decrease delays in discharge from hospital. A controlled trial is needed to further evaluate these findings.

P93. INDICATIONS AND FINDINGS IN UPPER ENDOSCOPY IN PATIENTS AFTER BARIATRIC SURGERY. John S.

Koppman, MD, Samuel Szomstein, MD, Raul J. Rosenthal, MD, Cleveland Clinic Florida, Weston, FL.

Background:

Patients after bariatric surgery often present with nonspecific foregut symptoms. To our knowledge, no study has examined the role of endoscopy in this population.

Methods:

Medical records of 435 consecutive bariatric patients were reviewed. 46 required endoscopy. All endoscopies were performed by a bariatric surgeon. Data include initial procedure, age, gender, time to endoscopy, indication, endoscopic findings, and number and type of corrective surgical interventions.

Results:

Of 435 consecutive bariatric surgery patients, 11% (46) required endoscopy. 67% (31/46) had laparoscopic gastric bypass and 33% (15/46) had laparoscopic gastric banding. Mean time to endoscopy was 14.4 months overall, 16.5 months for band patients and 13.4 months for bypass patients.

In the 31 bypass patients, indications were pain 52% (16), vomiting 29% (9), reflux 6% (2), dysphagia 6% (2), weight regain 3% (1) and anemia 3% (1). Findings included gastritis 68% (21), stricture 13% (4), marginal ulceration 3% (1), stricture and ulceration 6% (2), gastro-gastric fistula 3% (1), gastro-gastric fistula with stricture 3% (1), and normal in 20% (1); 16% (5) required surgical intervention.

In the 15 band patients, indications were reflux 47% (7), pain 20% (3), dysphagia 13% (2), and surveillance 20% (3). Endoscopy revealed gastritis in 80% (12) and was normal in 20% (3); 7% (1) required surgical intervention.

Conclusion:

Upper endoscopy is a useful tool for the bariatric surgeon. Bypass patients require more endoscopy than do band patients. In both populations, a significant majority of endoscopies revealed pathologic findings, many of which required surgical intervention.

P94. LINEAR STAPLER NON-STITCH GASTROJEJUNOSTOMY IN LAPAROSCOPIC GASTRIC BYPASS. Richard Frazee, MD¹, Eldo E. Frezza, MD, MBA², ¹Abilene Diagnostic Clinic Surgical Associates, Abilene, TX, ²Texas Tech University Health Sciences Center, Lubbock, TX.

Background:

We describe a new technique for laparoscopic gastric bypass (LGBP).

Methods:

The technique consisted of performing the gastrojejunostomy with a linear stapler. Six ports were used with one 5mm, four 12mm. All of the bypasses were 100cm. The dissection started by taking the greater omentum with harmonic scalpel from the greater curvature.

The linear stapler was used to perform an angled gastric transection between the proximal Stomach fundus and the antrum, to resect the gastro-enterotomy, and to create a 30 cc gastric pouch.

The linear staple was used to perform a horizontal gastric dissection above the antrum. The gastrojejunostomy was performed with two 45 mm linear staplers from the greater curvature towards the lesser curvature. No stitches were used.

Results:

This technique was used in 257 patients. There were 241 females and 16 males with a mean age of 37, and a mean BMI of 50. There was one anastomotic leak at the gastrojejunostomy that required return to the O.R. for repair. Excess body weight loss was 34% at 3 months, 52% at 6 months, 73% at one year, 71% at two years, and in the few patients with three year follow-up 72%.

Conclusion:

This left approach with a no-stitch gastrojejunal anastomosis with linear staple 1) facilitates LGBP, 2) eliminates laparoscopic stitching, 3) requires a lower learning curve, and 4) possibly decreased gastrojejunostomy-related complications. If the potential to reduce complications at the level of the gastrojejunostomy is proven, the technique could become the standard procedure by which laparoscopic gastric bypass is performed.

P95. EFFECT OF EXERCISE ON WEIGHT LOSS IN THE FIRST SIX MONTHS AFTER LAPAROSCOPIC GASTRIC BYPASS. Jorge L. Sosa, MD, FAC, Jannell E. Baez, MS, RD, CN, New Life Health & Fitness, Hialeah, FL.

Background:

Combining an exercise and nutritional program in the early post-operative phase after gastric bypass surgery should demonstrate a more pronounced increase in weight loss. Our mandatory bariatric program combines exercise and nutrition follow-up in the first post-operative year. We wanted to evaluate the effect of compliance with exercise on % decrease in excess BMI. All patients followed the same nutritional program and were compliant with follow-up visits.

Methods:

We analyzed collected data from randomly selected Roux-en-Y gastric bypass patients using nutritional charts and exercise facility attendance records in the initial 6 months after surgery. We examined the frequency of exercise sessions versus % decrease in excess BMI.

Results:

A total of 333 patients were divided into 2 groups depending on frequency of workout sessions in the six months following gastric bypass. Group A (n=202) exercised more than 48 times and group B (n=131) exercised less than 48 times. There was a significant difference in mean percent drop in excess BMI in group A (M=61.2%) versus group B (M=55.3%) with p <0.001.

Conclusion:

Compliance with an exercise program results in a greater % decrease in excess BMI in post gastric bypass patients in the first six months after surgery. Patients exercising at least twice a week had a significantly higher % drop in excess BMI. Therefore greater emphasis needs to be made on exercise and nutrition programs after bariatric surgery.

P96. LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: DOES ROUTINE, STANDARDIZED FOLLOW-UP IMPROVE WEIGHT LOSS OUTCOMES? Julie J. Kim, MD, Scott A. Shikora, MD, Leo Claros, MD, Mike Tarnoff, MD, Tufts-NEMC, Boston, MA.

Background:

Laparoscopic adjustable gastric band (LAGB) works by creating graded restriction through sequential adjustments. Conventional wisdom has recommended that more frequent visits for LAGB adjustments would improve outcome. Our follow-up protocol encourages monthly post-operative visits (POV) regardless of whether an adjustment is performed. The aim of this study was to evaluate the role of POV on weight loss outcomes (WLO) after LAGB.

Methods:

63 patients were identified with >12 months follow-up. WLO were analyzed by the number of visits, <6 and >6. In addition, patients with excess weight loss (EWL) <25% and >25%, were analyzed by the number of visits and the longest interval between visits (months).

Results:

Mean age 44 years. Mean BMI: 43 kg/m². Sex ratio: 17% M/83% F. Mean follow-up: 20 months. Mean %EWL: 31% (-13-90). 24 patients (37.5%) presented for >6 visits with mean 7.1 fills and mean %EWL of 31.6%. 39 patients (61.9%) presented for <5 visits with mean 3.4 fills and %EWL of 30.3%. There were 19 pts with <25% EWL with the mean number of visits 6.7, and the greatest interval between visits 12.4 months. There were 44 pts with >25% EWL with the mean number of visits 7.1, and the greatest interval between visits 11.9 months.

Conclusion:

Surprisingly, more frequent visits did not correlate statistically with improved WLO. In addition, %EWL did not seem to depend on the number of visits or the interval between visits. This would suggest that a patient initiated protocol for POV with or without adjustments would be more appropriate than following a standard (e.g. monthly) fixed protocol.

P97. OPEN JEJUNAL ILEAL BYPASS (OJIB) VS. LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG): EVALUATION AS A PRIMARY FIRST STAGE OPERATION (FSO) IN HIGH RISK PATIENTS PRIOR TO GASTRIC BYPASS (GBP). Corrigan L McBride, MD, Chad Ringley, MD, Christa Black, PA-C, Jon Thompson, MD, University of Nebraska Medical Center, Omaha, NE.

Background:

To improve outcomes in high risk patients, the staged surgical procedure is growing in frequency. Both OJIB and LSG have been proposed as FSO and our aim was to compare them.

Methods:

Our database was examined for FSO with respect to demographics, surgical details, and complications.

Results:

Since 3/02, 18 patients had a FSO. There were 10 females, 8 males with an age of 47.3 yrs(21.8-63.0).

For the 11 OJIB, the BMI was 70.7kg/m² (53.3-89.6). Indication was hepatomegaly in 9(81.8%) and cardiopulmonary instability in 2. OR time was 180 min and LOS was 19.7d (3-146). There were 2 deaths (18.2%)[PE and MOSF]. One patient had a 146d LOS for a stroke, respiratory and renal failure. One has refused GBP, 1 was lost to follow-up and 6 have had GBP. Of these EBWL was 50.2% (35.9-67.1). Time was 0.8yr.

For the 7 LSG, the BMI was 63.6 kg/m² (52.5-76.1). Five (71.4%) were for high risk co-morbid conditions/BMI and were planned pre-operatively; the remaining 2 were for hepatomegaly. OR time was 105 min and LOS was 3.3d (2-7). 3/8(37.5%) were readmitted for dehydration. One had a hip fracture on POD#1. Four have completed the GBP. The EWL was 33.6% (29.4-38.8, p=0.02) and the time was 0.95yrs. The weight loss comparisons and complications after GBP need longer term follow-up before they can be reported.

Conclusion:

The EWL of a OJIB is greater than a LSG as a FSO. It may not be the FSO of choice because of the higher mortality and risks associated with non-compliance and refusal to get the second stage

P98. IS THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY - 2 (MMPI-2) REALLY USEFUL TO PREDICT OUTCOME AFTER BARIATRIC SURGERY? RETROSPECTIVE ANALYSIS OF SIX HUNDRED FORTY FOUR BARIATRIC

PATIENTS. Sergio J. Bardaro, MD, Emma Patterson, MD, Jay Jan, MD, Laura July, MD, Robert Poole, PhD, Luahna Ude, PhD, Dennis Hong, PhD, Legacy Health System, Portland, OR.

Background:

The MMPI-2 is routinely used in bariatric surgery. Its role in this patient population is debatable. Our hypothesis is that high scores (>65) in depression (D), hysteria (Hy), hypochondriasis (Hs), psychopathic deviate (Pd) and behavioral discontrol (MAC-R, APS, AAS) would predict weight loss.

Methods:

Analysis was compared for all patients who had 1-year follow-up data. We compared patients who underwent laparoscopic Roux-en-Y gastric bypass (LRYGBP) who lost less than 35% EWL at 1 year versus those who lost greater 35% EWL. Similarly, we compared patients who underwent laparoscopic gastric band (LGB) who lost less than 25% EWL at 1 year versus those who lost greater than 25% EWL. Statistical analysis was carried out using 2-tailed Student's t-test. Significance was $p < 0.05$.

Results:

953 patients underwent bariatric surgery at our institution. 644 patients had MMPI-2 test available for study. In this cohort, 228 patients who underwent LRYGBP and 204 patients who underwent LGB had 1-year follow-up. 204 LRYGBP and 155 LGB had > 35% and >25% EWL at 1 year respectively. 14 LRYGBP and 49 LGB had <35% and <25% at 1 year respectively. Hs was mildly elevated in all groups, but especially in those with poor weight loss. There was no statistical significance in all variables studied between groups ($P > .05$).

Conclusion:

MMPI-2 scores are in the normal range in bariatric surgery patients, with the exception of the hypochondriasis score, which is elevated. No variables were established as a predictor for poor weight loss in this cohort of patients.

P99. ENDOSCOPIC INTRALUMINAL SUTURING IN A POSTOPERATIVE ROUX-EN-Y GASTRIC BYPASS PATIENT WITH A GASTRIC POUCH FALSE DIVERTICULUM. Michael Schweitzer, MD, Johns Hopkins University, Baltimore, MA

Background:

Endoscopic intraluminal suturing devices are currently being used to treat gastroesophageal reflux disease. These suture devices now afford us the opportunity to operate on the stomach pouch of post-operative gastric bypass patients

Methods:

A previous vertical banded gastroplasty patient who failed to maintain weight loss presented for conversion to Roux-en-Y gastric bypass at a BMI of 44 kg/m^2 in April 2002. Postoperatively, she developed a leak into the drain that had been placed at the original surgery. She did not require re-operation nor ICU care and was discharged home with a drain and antibiotics. Over the next 6 months the drain was replaced several times before finally being removed. The patient presented a month later with epigastric pain. A gastric pouch false diverticulum was found by upper gastrointestinal series and EGD. EGD revealed irritation at the orifice of the false diverticulum which was most likely from food particles. The patient was taken to the operating room for closure of her diverticulum using intraluminal suturing techniques. The false diverticulum was injected with fibrin glue and then closed with 3 sutures using the Cook ESD® Device for intraluminal endoscopic suturing.

Results:

The patient tolerated the procedure well and has had no clinical symptoms since the closure of the false diverticulum. She has had successful weight loss from her conversion to a gastric bypass and is currently a BMI of 22.

Conclusion:

Upper endoscopic intraluminal suturing is an exciting new field of emerging technology that will, in time, find its role in gastric surgery. The gastric pouch and stoma of postoperative gastric bypass patients is within reach for endoscopic intraluminal therapy. The current devices available were designed for gastroesophageal reflux disease. They will need further refinement to allow more flexibility so as to gain easier access to the rest of the stomach and not just the gastroesophageal junction.

P100. LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IN HIGH-RISK PATIENTS: A SINGLE INSTITUTION'S EXPERIENCE. Kurt E Roberts, MD, Andrew J. Duffy, MD, Joyce Kaufman, James D. Dziura, PhD, Robert L. Bell, MD, Yale University School of Medicine, New Haven, CT.

Background:

Preoperative body mass index (BMI), male gender, and age have been recognized as predictors of poor outcome after gastric bypass. Nevertheless, we hypothesized that high-risk patients who underwent laparoscopic Roux-en-Y gastric bypass (LRYGBP) at our institution would have complication rates similar to our overall experience.

Methods:

From August 2002 and August 2005, we performed 366 LRYGBP. Patient demographics, including age, gender, operative time, length of stay (LOS), and complications were entered into a prospective, longitudinal database. BMI as well as 6, 12 and 24-month excess weight loss (EWL) were analyzed. Complications were documented and correlated with male gender, age ≥ 40 , and preoperative BMI $\geq 70 \text{ kg/m}^2$.

Results:

Mean age was 41.5 years, 81% female, with a mean BMI of 50.8 kg/m^2 . Mean LOS was 2.8 days and mean EWL at 6, 12, and 24-months were 50.7%, 62.6% and 70.0 %, respectively. These complications were encountered: one death (0.3%), 13 marginal ulcers (3.6%), 7 small bowel obstructions (1.9%), 5 gastrogastic fistulae (1.4%), 5 postoperative hemorrhage (1.4%), 2 gastric leaks (0.5%) and 2 aspiration pneumonias (0.5%). Male patients had more complications ($p < 0.04$) and longer operative times ($p < 0.0002$). Patients with BMI $\geq 70 \text{ kg/m}^2$ or age ≥ 40 had significantly longer LOS ($p < 0.01$ and $p < 0.007$, respectively), but no increase in operative time or complication rate. Patients with complications ($p < 0.03$) tended to have longer operative times.

Conclusion:

LRYGBP can be performed in high-risk individuals with low morbidity and mortality, and excellent EWL by experienced surgeons. Male gender, but not age or BMI, predicted complications in our series.

P101. NUTRITION POST SLEEVE GASTRECTOMY. Liz Goldenberg, MPH, RD, C, Alfons Pomp, MD, Jaimie Sherry, MS, RD, CD, New York Presbyterian Hospital, Weill Cornell College of Medicine, New York, NY.

Background:

Laparoscopic sleeve gastrectomy (LSG) is a relatively new weight loss procedure which can be performed as a first stage operation prior to Roux-en-Y Gastric Bypass (RYGBP) or Duodenal Switch (DS) for high risk/high BMI. Little is known about its nutritional effects.

Methods:

Retrospective review of patient records 2002-2005; pre and post LSG was performed; a 16 patient sample was analyzed for albumin, iron, ferritin, selenium, zinc, PTH, vitamins A, D, and B-12. Dietary recommendations for LSG include emphasizing protein and incorporating all food groups into a balanced diet of 3 meals and 1 snack. Supplement recommendations are 1 adult multivitamin and 600-1200 mgs (M vs. F) of calcium citrate with vitamin D daily.

Results:

The most common deficiencies were: vitamin B12: 4/16 (25%) 3 mos, 1/16 (6%) 6 mos, 2/16 (13 %) 1 yr; vitamin D: 7/16 (44%) 3 mos, 6/16 (38%) 6 mos; selenium: 3/16 (19%) at 3 mos, 1/16 (6%) 6 mos and 1 yr; high PTH: 4/16 (25%) 3 mos, 1/16 (6%) 6 mos and 1 yr. No patients had low albumin. Patients tolerated a wide variety of foods by 3 months post operatively and incorporated our guidelines into food selections.

Conclusion:

LSG patients appear to have some deficiencies similar to those undergoing RYGBP and DS. We do not have data in regard to the presence of nutrient deficiencies prior to surgery. Further research on patient compliance with nutrition guidelines and vitamin and supplement recommendations is required.

P102. RESECTION OF THE BYPASSED STOMACH IN ROUX-EN-Y GASTRIC BYPASS: INDICATIONS AND RESULTS. Alex Escalona, MD, Nicolas Devaud, MD, Gustavo Perez, MD, Luis Ibez, MD, Pontificia Universidad Católica de Chile, Santiago, Chile.

Background:

Roux-en-Y Gastric Bypass (RYGBP) is among alternatives of choice in bariatric surgery. Difficulty in evaluating the bypassed stomach is controversial, specially in countries with a high incidence of gastric cancer. The aim of this study was to evaluate indications and results of RYGBP with resection of the bypassed stomach.

Methods:

1455 patients underwent RYGBP between August 1992 and August 2005, and were prospectively followed. 47.8% underwent open RYGBP (ORYGBP) and 52,1% laparoscopic surgery (LRYGBP). Clinical and demographic data, post operative results and complications were registered. Mean age was 43 ± 10 years old, with a mean BMI of $42,8 \text{ (kg/m}^2\text{)}$.

Results:

Ten patients (0,7 %) underwent resection of the bypassed stomach after RYGBP. Seven and three patients underwent laparoscopic and open RYGBP, respectively. Indications for resection of the bypassed stomach were intestinal metaplasia (n=6), familial history of gastric cancer (n=2), incidental gastric cancer (n=1) and gastric polyposis (n=1). Oncologic lymph node dissection was performed in the

incidental gastric cancer. Mean operative time was 185 ± 5 minutes for open surgery, and 145 ± 3 for LRYGBP. Mean hospital stay was 6 ± 1 days for ORYGBP and 5 ± 2 days for LRYGBP. There were no deaths. Postoperative complications were observed in 2 patients (20 %); one patient with an abdominal abscess and the other with stenosis of the gastrojejunostomy. Mean excess weight loss after one year was 86,6% in ORYGBP and 92,5 in LRYGBP.

Conclusion:

Resection of the bypassed stomach is a feasible and safe procedure in patients with higher risk for gastric cancer.

P103. LONGITUDINAL STAPLED CLOSURE AT GASTRIC BYPASS JEJUNO-JEJUNOSTOMY IS SAFE AND EFFECTIVE. John E. Meilahn, MD, Laurie S. White, CFA, Kiup A. Kim, MD, Victoria Frain, MSN, CRNP, Temple University Hospital, Philadelphia, PA.

Background:

Transverse stapled or longitudinal handsewn jejunostomy closure has been advocated over longitudinal stapled closure in order to minimize stenosis. We postulated that longitudinal stapled closure could be performed safely if minimal anterior tissue was removed by linear stapling, and that longitudinal closure would not adversely affect leak rates or stenosis.

Methods:

Gastric bypass was performed in 540 patients (492 female, 48 male). Mean BMI was 50.6 (range 36.2 to 100.0). Open bypass was done in 187 and laparoscopic in 353. Antimesenteric openings were made in the Roux and the biliopancreatic limbs. The 45 mm linear stapler (Ethicon) was inserted into both limbs and fired. The anterior opening was then closed in the longitudinal direction with three (laparoscopic) or four (open) interrupted silk sutures. After elevating the sutures with graspers, the 45 mm linear stapler (Ethicon) for laparoscopic or the 55 mm linear cutter for open cases were then fired across the opening, incorporating minimal tissue. Two silk sutures fixed the side of the Roux limb to the end of the biliopancreatic limb as anti-obstruction sutures and also to partially buttress the longitudinal staple line with serosa. The mesenteric defect was closed with continuous silk suture.

Results:

All jejunostomies healed without leaks or acute cases of stenosis. One laparoscopic anastomosis resulted in a partial stenosis with intermittent abdominal discomfort and was treated by laparoscopic entero-enterostomy 19 months after bypass.

Conclusion:

Longitudinal stapled closure of the jejunostomy is safely and effectively performed, without leaks and with minimal development of stenosis, with careful and consistent technique.

P104. INTRA-RECTUS MESH HERNIA REPAIR FOLLOWING ROUX-EN-Y GASTRIC BYPASS. David B. Lautz, MD, Cesar E. Escareno, MD, Kerri A. Clancy, RN, Rodney Chan, MD, Brigham and Women's Hospital, Boston, MA.

Background:

Ventral hernia following open bariatric surgery remains a clinical problem. We report our experience with a 3-layer mesh interposition hernia repair that places the mesh within the confines of the rectus. This repair is a modification of the repair originally described by Stoppa, which does not use lateral trans-fascial anchoring sutures.

Methods:

Patients who had undergone an open RYGBP, and who subsequently developed an incisional hernia greater than 3 cm in size were considered for this repair. All procedures were sequential and performed by a single surgeon. All patients were followed prospectively in the bariatric surgery clinic. All hospital and clinic charts were reviewed retrospectively.

Results:

We have performed this repair in 44 bariatric patients between 2001 to present, an average of 20 months from their bariatric procedure. Average BMI at the time of their RYGBP was 49.9 and at the time of the repair was 33.5. Eleven patients had simultaneous panniculectomy. No patients had their repair for strangulation or incarceration. 4/44 patients were diabetic. Average operative time for those patients who did not have a panniculectomy was 108 minutes. Peri-operative complications included 2 wound infections, one of which was at a panniculectomy incision. Average follow-up was 9.2 months. No evidence of hernia recurrence was noted by history or physical exam on follow-up in any patient undergoing this type of repair.

Conclusion:

Conclusion: Interposition repair of midline defects may offer advantages over standard approaches for the bariatric patient who presents for ventral hernia repair following open RYGBP.

P105. LAPAROSCOPY IS SUPERIOR TO RADIOLOGIC IMAGING IN POSTOP BARIATRIC PATIENTS WITH ABDOMINAL PAIN. Emil L. Popa, MD, Daniel T. Dempsey, MD, John E. Meilahn, MD, Dawn Stepnowski, MSN-CRNP, Victoria Frain, MSN-CRNP, Christopher Kowalski, MD, Temple University Hospital, Philadelphia, PA.

Background:

Clinical suspicion of internal herniation (IH) or obstructing adhesions (OA) should be present in every case of abdominal pain in postoperative bariatric gastric bypass patients (GBP) independent of other negative findings. We compared the diagnostic accuracy of CT-scan and UGI to laparoscopy for IH or OA after GBP.

Methods:

Three surgeons performed 919 GBP surgeries (516 laparoscopic, 403 open). The selected charts of patients re-explored for abdominal pain more than 30 days after the index procedure were reviewed for weight loss, clinical presentation, preoperative work-up, treatment, findings and outcome. Data was subdivided for open and laparoscopic GBP, antecolic and retrocolic technique.

Results:

There were 80 postoperative explorations (70 laparoscopic and 10 converted to open) in 71 patients presenting to clinic or ER with abdominal pain. 77 explorations (96%) were positive (IH=57, OA=20). No patient had compromised bowel. 53 patients had 74 pre-exploration studies (54 CT-scans, 20 UGI). Only 17 studies (23%) were abnormal compared to 96% of explorations. Radiological studies had a Sensitivity of 24% and Specificity of 100% (NPV=5%, PPV=100%). Average decrease in BMI in the 71 patients was 17.1±5.2 and average interval from GBP to re-exploration for abdominal pain was 397±301 days.

Conclusion:

In GBP patients presenting with abdominal pain the surgeon cannot rely on a negative CT or UGI to rule out IH or OA. A positive study though uncommon is very reliable. Early laparoscopic exploration reveals clinically significant abnormalities not diagnosed by radiologic imaging in these patients, and may prevent bowel compromise.

P106. THE RISK OF IVC FILTER REMOVAL IN BARIATRIC SURGERY PATIENTS. Laura L. Machado, MD¹, Bruce M. Wolfe, MD², Sandra C. Rowlee, MS,RN,ACNP¹, ¹Mercy San Juan Medical Center, Carmichael, CA² Oregon Health Sciences University, Portland, OR

Background:

Pulmonary embolus (PE) is a rare, but potentially fatal complication. Morbidly obese patients are at increased risk for deep venous thrombosis (DVT) and PE. Current consensus is unclear about the most effective method for prophylaxis. Prophylactic Inferior Vena Cava (IVC) filters in high risk patients have been used in some settings. The particular increased risk of thrombosis and embolism following IVC filter removal has not been reported in the bariatric surgical population.

Methods:

Retrospective database review of a single bariatric program was performed. A total of 387 patients underwent bariatric surgery from September 2003 to November 2005. All patients received subcutaneous heparin prophylaxis, which was administered preoperatively and perioperatively. Incidence of DVT and PE were reviewed. Indications for IVC filter placement and timing of removal were noted.

Results:

3 patients (0.7%) experienced postoperative DVT and PE. All three patients received IVC filter placement. One filter was placed preoperatively due to previous PE history and was removed 10 days post-operatively. This patient experienced a fatal PE 12 days later despite ongoing anticoagulation. Two filters were placed after clinically significant bilateral pulmonary emboli were documented. One patient experienced a presumed fatal PE 1 day following IVC filter removal.

Conclusion:

Caution should be used when considering IVC filter removal in bariatric patients.

P107. LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: COMPARISON OF THREE TECHNIQUES OF GASTROJEJUNOSTOMY. David R. Miles, MD¹, J. Mat Jones, MD², ¹Coastal Bariatric Center, New Hanover Regional Medical Center, ²New Hanover Regional Medical Center

Background:

The benefit of antecolic vs. retrocolic placement of the Roux limb remains controversial. The purpose of this study was to compare weight loss results and gastrojejunostomy complication rates between three techniques of gastrojejunostomy.

Methods:

The study enrolled 400 consecutive patients who underwent laparoscopic Roux-en-Y gastric bypass by a single surgeon from 9/17/2002 through 9/26/2005. Data was collected prospectively and broken into three phases that corresponded with significant changes in technique. Retrocolic with anterior pouch anastomosis, antecolic with anterior pouch anastomosis, and antecolic with posterior micropouch anastomosis. All phases employed a linear stapler with absorbable suture to close the enterotomy. Weight loss was calculated at 6, 12, 18, and 24 months. The rate of anastomotic leak, stenosis and ulceration was calculated.

Results:

Percent of excess weight lost for all 400 patients was found to be 67%, 71% and 70% at 12, 18 and 24 months. There is a trend for improving weight loss between phases that has not reached statistical significance. Combined complication rates for the study are: Leak 0.5% (range 0%-1%), Stenosis 0.7% (range 0%-1.6%), and Ulceration 2.3% (range 1.6%-3.2%). There were no significant differences between phases.

Conclusion:

The position of the laparoscopic Roux limb does not appear to have an effect on either weight loss or the incidence of complications at the gastrojejunostomy. Surgeon preference should be based on which technique has the lowest incidence of intestinal obstruction or internal hernia formation. Each linear stapler technique compares quite favorably to published results using an EEA stapler and are therefore strongly recommended.

P108. PATIENTS ON COUMADIN UNDERGOING BARIATRIC SURGERY. Ramon Mourelo, MD, Patricio Fajnwaks, MD, John Koppman, MD, Huy Trieu, MD, Ruth O'Mahony, MD, Samuel Szomstein, MD, Raul J. Rosenthal, MD, Cleveland Clinic Florida, Weston, FL.

Background:

The incidence of postoperative hemorrhage in morbidly obese patients undergoing bariatric surgery is reportedly 4.4%. The high prevalence of serious cardiovascular co-morbidities in these patients results in a significant number of surgical candidates who are chronically on anticoagulation therapy. The aim of this study was to determine the risk of bleeding complications and mortality under these special circumstances.

Methods:

The records of 2,126 consecutive patients who underwent bariatric surgery were retrospectively reviewed. 23 patients were chronically on Coumadin for various indications. Of these, 20 patients underwent gastric bypass, one had revision, and two had a sleeve gastrectomy. Indications for anticoagulation included deep vein thrombosis, pulmonary embolism, atrial fibrillation, and mechanical heart valve. Preoperatively, patients were placed on regular or low molecular heparin. Duration of hospitalization, bleeding complications, and need for surgery and blood transfusion were analyzed.

Results:

Average length of hospitalization was 7.5 days. Bleeding complication rate was 8.6%. One patient (4.3%) developed acute intraluminal postoperative hemorrhage, required blood transfusion and was managed conservatively. Another patient (4.3%) developed intra-abdominal bleeding requiring blood transfusions and re-exploration to drain an infected hematoma. There were no deaths in this series.

Conclusion:

Bariatric surgery in patients on chronic anticoagulation is safe. However, the frequency of postoperative bleeding requiring blood transfusion and reoperation is higher than in the regular morbidly obese population.

P109. OUTPATIENT OPEN GASTRIC BYPASS SURGERY. David Syn, MD, David E. Mangold, MD, Allison A. Cobb, NP, Covenant Medical Center, Lubbock, TX.

Background:

Laparoscopic gastric bypass surgery has become synonymous with minimally invasive bariatric surgery leading to shorter hospital length of stays, however, similar if not better results can be achieved with open gastric bypass surgery when attention is given to reduction of incision size and adequate analgesia.

Methods:

From June 2005 to November 2005, 75 consecutive primary open gastric bypass procedures were performed by a single surgeon. Average incision length was 10cm. Average operative time was 65 minutes. Rectus sheath block with 0.25% Marcaine was used in all patients. External pain pump with dual catheters tunneled into bilateral rectus sheaths delivering 2cc/h of 0.25% Marcaine for 72hrs post-operatively was placed in all patients. Intravenous Ketorolac was given peri-operatively. Patients were discharged on oral hydrocodone. Average age was 43.1 years. 89% were females. Average BMI was 54.5 kg/m². Average number of life-threatening co-morbidities per patient was 2.1.

Results:

64 of 74 patients were discharged at 24 hours post surgery. 2 of 74 patients were discharged within 12 hours of surgery. Average length of stay was 1.2 days. There were no anastomotic leaks or deaths. One patient was readmitted within 30 days. The most common post-operative complication was seroma, 7 of 74. The second most common post-operative complication was wound infection, 3 of 74.

Conclusion:

Open gastric bypass surgery, when done with attention to reducing incision length and controlling post-operative pain, can yield results similar to if not better than laparoscopic surgery and in select patients can be done as same-day surgery.

P110. OUTCOMES OF LAPAROSCOPIC RESTRICTIVE BARIATRIC PROCEDURES IN ACADEMIC CENTERS. Esteban Varela, MD, Allen Sabio, MD, Samuel E. Wilson, MD, Ninh T. Nguyen, MD, University of California Irvine Medical Center, Orange, CA.

Background:

The outcome of laparoscopic adjustable gastric banding (Lap-Band) has only been examined within single institutional experience. No study has examined the outcome of laparoscopic restrictive bariatric procedure at a national level due to the lack of specific ICD-9 procedure codes. The University HealthSystem Consortium (UHC) contains data from all major teaching hospitals in the US and recently added specific procedural codes for lap-Band and laparoscopic gastroplasty. The aim of this study was to examine the utilization and outcome of laparoscopic restrictive procedures performed at academic medical centers.

Methods:

Clinical data of 11,073 patients who underwent bariatric surgery between 2004 and 2005 were obtained from the UHC database. A total of 1,412 patients (13%) had laparoscopic gastric restrictive procedures. Of these, 960 patients underwent Lap-Band (68%) and 452 patients had laparoscopic gastroplasty. The data were reviewed for demographics, co-morbidities, length of hospital stay, postoperative morbidity, 30-day readmission, and in-hospital mortality.

Results:

Removal of Lap-Band occurred in 0.4% and revised in 1.6% of patients. (See Table)

<i>Variables</i>	<i>Lap-Band (n=960)</i>	<i>Lap Gastroplasty (n=452)</i>
Centers (No.)	35	28
Female (%)	72.7	74.8
Caucasian (%)	80.3	70.3 *
Mean length of stay (days)	1.2 ± .6	1.6 ± 1.2
Overall complications (%)	2.4	2.7
GI Perforations (%)	0.8	0.2
Postoperative hemorrhage (%)	0.5	0.7
Wound infections (%)	0	0
30-day readmission (%)	0.1	0.7
Mortality (%)	0	0
Mean costs (\$)	7,872 ± 2,688	8,233 ± 3,502

*P<0.05, proportions by Z-test

Conclusion:

Within the context of this analysis of academic centers, laparoscopic gastric restrictive procedures offer a short length of hospital stay with minimal morbidity and no mortality.

P111. LONG-TERM QUALITY OF LIFE IMPROVEMENT AFTER LAPAROSCOPIC GASTRIC BYPASS. Jennifer G. Ginnings, RN, Christian R. Ketel, NP, MSN, Barry R. Berch, MD, Joan L. Kaiser, RN, MSN, Alfonso Torquati, MD, MSCI, William O. Richards, MD, Vanderbilt University Medical Center, Nashville, TN.

Background:

Quality of life (QOL) is getting attention in the medical literature. Treatment outcomes are now gauged by their effect on the QOL along with their direct effect on diseases they are targeting. Similarly, in obesity, consensus has been reached on the importance of QOL as an independent outcome measure for obesity surgery along with weight loss and co-morbidity. The aim of the study was to assess the impact of patient demographics and co-morbidities on QOL improvement after laparoscopic gastric bypass surgery.

Methods:

QOL was evaluated using the short-form-36 (SF-36). Forms were completed preoperatively and ≥ 2 years post-operatively in 100 patients (88 female, 12 male; mean age 44 years). Using multivariate linear regression analysis, patients' demographics and SF-36 component scores were used to determine predictors of QOL improvement.

Results:

The average follow-up time was 28 months. Body Mass Index (BMI) significantly decreased from 47.5 ± 5 to 29 ± 6 ($P < 0.001$), with excess weight loss (EWL) of $70.9 \pm 19\%$. Long term SF-36 scores showed significant improvement (45.8 ± 17 to 75.6 ± 21 , $P < 0.002$). Significant differences between the pre and post-operative group were found for most all SF-36 components (Table). Age was the only variable found using multivariate analysis to have independent QOL predictive value. Patients with age < 50 years had four times the likelihood to achieve a physical component score equal or higher than the general US population mean of 50.1 (OR 4.1. 95% CI:0.08-0.7, $P = 0.009$).

Conclusion:

QOL improvement are achieved and maintained at 2 years following LGBP. Age < 50 years was an independent predictor of maximal QOL improvement.

Table 1. SF-36 subscale scores in pre and post-operative groups

Components	Preoperative Group (n=100)	Postoperative Group (n=100)	P (t-test)
Physical Functioning	39.6 \pm 22	83.6 \pm 22	<0.001
Role - Physical	34.7 \pm 35	76.5 \pm 38	<0.003
Bodily Pain	50.1 \pm 23	73.7 \pm 28	<0.001
General Health	39.7 \pm 21	70.7 \pm 26	<0.003
Vitality	31.3 \pm 20	60.5 \pm 26	<0.009
Social Functioning	59.2 \pm 27	81.3 \pm 27	<0.004
Role - Emotional	67.3 \pm 39	74.6 \pm 40	NS
Mental Health	67.3 \pm 18	74.8 \pm 22	<0.004
Physical Component Score (PCS)	41.1 \pm 20	76.1 \pm 24	<0.001
Mental Component Score (MCS)	56.3 \pm 20	72.8 \pm 26	<0.002

P112. NON-COMPLIANCE WITH AN ORGANIZED EXERCISE PROGRAM AFTER WEIGHT REDUCTIVE SURGERY. John G. Zografakis, MD, Katherine M. Hawn, MBA, MSN, Debbie Pasini, RN, BSN, Summa Health System, Akron, OH.

Background:

To evaluate our experience with an organized exercise program incorporated into the pre and post-operative care of patients undergoing weight reductive surgery at a new program.

Methods:

Routine and consistent exercise is important for a good outcome after weight reductive surgery. All patients that enroll in our surgical weight loss program are required to participate in individual and group exercise sessions. Individual pre and post-operative assessments are conducted, followed by group sessions held weekly at the same day and time. These weekly sessions are pre-paid by the patient and led by an experienced exercise physiologist.

Results:

Despite having pre-paid for 6 months of organized exercise, attendance was minimal with a high rate of non-compliance. During a nine month span, 50 laparoscopic Roux-en-Y gastric bypass and 20 laparoscopic adjustable gastric banding procedures were performed. Overall attendance was 17.1% (12/70). Of those that attended, 7/12 (58.3%) attended less than 5 sessions. Only 41.7% (5/12) attended more than 5 sessions. The main reason cited for not attending was scheduling conflicts due to lack of flexibility in changing the date and time of the sessions.

Conclusion:

Because of poor attendance, we have separated this component from our program fee, thus reducing the cost. Patients still complete a pre/post-operative exercise assessment, with an emphasis post-operatively on committing to a regularly scheduled exercise program. We offer an optional 6 month organized exercise program if requested. We encourage our patients to exercise routinely and continue to look for avenues to broaden our patients' exposure to exercise.

P113. ONE STEP GASTRIC BAND CONVERSION TO SIMPLIFIED LAPAROSCOPIC GASTRIC BYPASS. A 52 CASE SERIES. Almino Ramos, Manoel Galvao Neto, Manoela Galvao, Andrey Carlo, Edwin Canseco, Marcus Lima, Abel Murakami, Marcelo Falcao, Gastro Obeso Center, Sao Paulo, Brazil.

Background:

Adjustable Gastric band (AGB) is one of the effective surgical options to treat morbid obese patients. Some patients such as the sweet

eaters could not lose enough weight. It is a matter of controversy if the conversion should be performed in one or two steps as the tissue behind the band gets thick and may be a cause of suture line disruption

Methods:

in our series of 1,252 patients treated with AGB over 6 years, 162 (13%) had unsatisfactory weight loss. Among them 52 were converted to laparoscopic gastric bypass. There were 39 (76%) females; the operative time varied between 105 to 198 min (mean 125 min). Operative technique: the previous AGB port incisions were used to access the abdominal cavity; the adhesions were taken down following the AGB catheter, the anterior fundoplication was opened until it reached the angle of His; the band was opened and removed; the dissection of the small curvature began under the band. A gastroplasty over a boogie was done; the anastomosis was then constructed with a calibrated (11-12mm) end-to-side stapled gastrojejunostomy and an antecolic Roux-en-Y bypass on the supra-mesocolic space with 1,5 m of alimentary limb and 80cm of biliopancreatic limb. A drain was usually left in place.

Results:

9 (9,5%) patients had G-J stenosis treated with endoscopic balloon dilatation. No conversion, significant bleeding, leaks or deaths occurred.

Conclusion:

Converting failed AGB to laparoscopic gastric bypass is a very useful and safe.

P114. IMPLEMENTATION OF HFMEA IN A BARIATRIC SURGERY PROGRAM IMPROVES THE QUALITY AND CULTURE OF CARE. Laura Dominici, MD, Dmitry Nepomnayshy, MD, Tanya Brown, PA, Pamela O'Brien, PA, Douglas Alden, , David Brams, MD, Lahey Clinic Medical Center, Burlington, MA.

Background:

Quality of care is the highest priority of the bariatric surgeon; however, surgeons do not have full control over many facets of the patient's perioperative course. A cooperative approach by healthcare professionals may decrease the risk of complications and mortality. A Healthcare Failure Mode and Effect Analysis (HFMEA, based on FMEA used by aerospace and nuclear power safety engineers) achieves this goal by mobilizing a multi-specialty team to work proactively to identify and stratify risks to improve outcomes.

Methods:

Multi-specialty group practice and tertiary care hospital. Bariatric surgery volume 150 cases/year with 0% mortality. HFMEA team organized as quality of care initiative. Team included administrators, sub specialists, anesthesiologists, nurses and surgeons. HFMEA methodology utilized.

Results:

12 meetings were held with 100% participation. Complications at our hospital and reported statewide deaths were reviewed. All potential complications of each element of patient care were analyzed. These data were used to determine the severity and frequency of potential complications and to stratify risk for the preoperative, intraoperative, perioperative, and postoperative course.

The following initiatives were implemented: 1) facility-wide modifications to meet special needs of bariatric patients, 2) dedicated nursing units and nursing teams, 3) dedicated anesthesia team, 4) patient care pathways to insure best practices. This has resulted in a potentially safer environment for bariatric patients. Outcomes data are now being collected.

Conclusion:

HFMEA improves the quality and culture of care of bariatric surgery patients through a formal process that mandates the cooperation of surgeons, medical specialists, nurses and hospital administrators.

P115. OBESITY BEGETS OBESITY. Picard Marceau, MD, PhD¹, Simon Biron, MD, MSc¹, Frederic S Hould, MD¹, Stefane Label, MD¹, John G. Kral, MD², ¹Laval Hospital, ²SUNY Downstate Medical Center, Syracuse, NY

Background:

Children of mothers who have had a biliopancreatic diversion (BPD) have smaller birthweight than their siblings born before the surgery (BS). Which is the "healthier weight" remains to be determined.

Methods:

We present the progress of 172 children born after their mother's surgery (AS) through childhood and adolescence. Their weight was compared to those of their 45 siblings before surgery (BS) and to population standards (PS).

Results:

Birthweight and weight development of AS children were similar to PS, and statistically significantly lower than BS. Lower BMI

percentiles and lower prevalence of overweight and obesity in AS compared to BS persisted through adolescence, correcting for age, sex, birth order and mothers' parity.

Conclusion:

Children born after their mother's BPD have a healthier weight than their siblings born before their mother's surgery. Improved uterine environment brings an important and sustained decrease in obesity of offspring. This indicated a significant epigenetic transmission of obesity independent of genetic background.