

POSTERS

POSTERS OF DISTINCTION

Wednesday, November 13, 2013 • 11:45am - 12:45pm

- A-130-P INITIAL EXPERIENCE IN LAPAROSCOPIC GASTRIC PPLICATION (LGP) STUDY PROTOCOL AND MID-TERM FOLLOW-UP**
Carmen Santander
- A-300-P ASSOCIATION BETWEEN WEIGHT LOSS AND THE INCIDENCE OF GALLSTONE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: A PROSPECTIVE STUDY**
Wuttiport Manatsathit
- A-301-P PROSPECTIVE RANDOMIZED CLINICAL ANALYSIS BETWEEN THREE REINFORCEMENT TECHNIQUES ON STAPLE LINE IN SLEEVE GASTROPLASTY CASE STUDY WITH 345 PATIENTS**
Fabio Viegas, MD
- A-105-IH DOES BARIATRIC SURGERY IN ADOLESCENTS HAVE SIMILAR OUTCOMES AS IN ADULT PATIENTS? A CASE CONTROL STUDY**
Mitchel MC Cuiilty, BA
- A-131-P LONG TERM OUTCOMES OF LAPAROSCOPIC GASTRIC BANDING AT A SINGLE INSTITUTION**
David M Parker, MD
- A-174-P OUTCOMES OF BARIATRIC SURGERY IN MORBIDLY OBESE PATIENTS INFECTED WITH THE HUMAN IMMUNODEFICIENCY VIRUS**
Raul J Rosenthal, MD
- A-172-P COMPLICATIONS DO NOT AFFECT WEIGHT-LOSS AFTER LRYGB**
John M Morton, MD
- A-280-P ACUTE POST-BARIATRIC SURGERY INCREASE IN OREXIN LEVELS PREDICTS PREFERENTIAL LIPID PROFILE IMPROVEMENT**
Abhishek Gupta, PhD
- A-297-P THE IMPACT OF MEDICAL AND SURGICAL WEIGHT LOSS UPON THE HUMAN GUT MICROBIOME**
John M Morton, MD
- A-154-P DISCHARGE ON POSTOPERATIVE DAY ONE IS SAFE AND FEASIBLE IN SELECTED PATIENTS AFTER LAPAROSCOPIC ROUX-Y GASTRIC BYPASS**
Amrit Rambhajan, MD
- A-335-P OUTCOMES OF TRANSFERRING BARIATRIC PATIENTS**
Hanna Davis, DO
- A-153-P PREVALENCE AND IMPLICATIONS OF CIGARETTE SMOKING IN MORBIDLY OBESE PATIENTS UNDERGOING BARIATRIC SURGERY**
Raul J Rosenthal, MD
- A-233-P RESULTS OF GASTRIC BYPASS (LGB) AND SLEEVE GASTRECTOMY (LSG) IN BARIATRIC POPULATION WITH TYPE 2 DIABETES MELLITUS: A COMPARATIVE STUDY**
Carmen Santander
- A-155-P DOES TIGHTER PERIOPERATIVE HEMOGLOBIN A1C REGULATION PREDICT BETTER OUTCOMES AFTER PRIMARY BARIATRIC SURGERY?**
Angela Corea, MD
- A-178-P ESTABLISHING AN AMBULATORY HYDRATION CLINIC TO DECREASE READMISSION RATE AFTER BARIATRIC SURGERY**
Ali Aminian, MD
- A-234-P COMPARATIVE STUDY OF METABOLIC SURGERY: LOOP DUODENOJEJUNOSTOMY WITH SLEEVE GASTRECTOMY VERSUS ROUX-EN-Y GASTRIC BYPASS IN TYPE II DIABETES MELLITUS PATIENTS**
Andrea Ooi Se En, MBBS, MS
- A-132-P ADOLESCENTS DEMONSTRATE PARTIAL CARDIOVASCULAR RISK REDUCTION AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING SURGERY IN THE CONTEXT OF UNCHANGED FITNESS LEVELS**
Thao-Ly T Phan

Thursday, November 14, 2013 • 11:45am - 12:45pm

- A-222-P PROXIMAL VERSUS DISTAL LAPAROSCOPIC GASTRIC BYPASS IN SUPEROBESITY: PERIOPERATIVE RESULTS FROM A RANDOMIZED CONTROLLED TRIAL**
Marius Svanevik, MD
- A-302-P LAPAROSCOPIC CONVERSION OF ROUX-EN-Y GASTRIC BYPASS TO SLEEVE GASTRECTOMY: CASE SERIES**
H. Ruby Gatschet
- A-296-P DOES URINARY BPA CHANGE AFTER BARIATRIC SURGERY?**
John M Morton, MD
- A-232-P DIABETES SEVERITY SCORE (DSS): A USEFUL TOOL TO ASSESS THE SEVERITY OF DIABETES, SELECT THE APPROPRIATE SURGICAL PROCEDURE AND PREDICT THE REMISSION OF DIABETES**
Surendra Ugale, MBBS
- A-303-P LAPAROSCOPIC SLEEVE GASTRECTOMY: DOES THE SIZE OF THE STOMACH MATTER? PRELIMINARY RESULTS OF A PROSPECTIVE STUDY.**
Juan P Toro, MD
- A-173-P RISKS AND BENEFITS OF ROUX-EN-Y GASTRIC BYPASS AND LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING IN PATIENTS OLDER THAN 60 YEARS.**
Francois Pattou, MD
- A-223-P 5 YEAR WEIGHT LOSS AFTER BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH**
Philippe A Topart, MD
- A-150-P COMPARISON OF COMPLICATION RATES AND WEIGHT LOSS OUTCOMES AMONG LINEAR STAPLER, HAND SEWN AND CIRCULAR STAPLER GASTROJEJUNOSTOMY TECHNIQUES IN ROUX EN-Y GASTRIC BYPASS**
Michael G Sarr, MD
- A-175-P ROUTINE PREOPERATIVE ESOPHAGOGASTRODUDENOSCOPY HAS HIGH DIAGNOSTIC YIELD IN BARIATRIC SURGERY PATIENTS**
Cunchuan Wang, MD, PhD
- A-281-P IMPACT OF BARIATRIC SURGERY ON THYROID HORMONES IN OBESE EUTHYROID PATIENTS**
Tirissa Reid
- A-177-P COMBINING LAPAROSCOPIC GIANT PARAESOPHAGEAL HERNIA REPAIR WITH SLEEVE GASTRECTOMY IN OBESE PATIENTS**
Ankit Patel, MD
- A-176-P EXCELLENCE CAN BE ACHIEVED IN iLOW VOLUMEi BARIATRIC SURGERY CENTERS; A SINGLE CENTER EXPERIENCE.**
Kristin A Robinson, MD
- A-122-P SINGLE INCISION MULTIPOINT LAPAROSCOPIC BARIATRIC SURGERY: ERGONOMIC PRINCIPLES**
Praveen Raj, MS,DNB
- A-224-P BILIOPANCREATIC DIVERSION REQUIRES MULTIPLE VITAMIN AND MICRONUTRIENT ADJUSTMENTS WITHIN 2 YEARS OF THE SURGERY**
Philippe A Topart, MD
- A-133-P LONG TERM OUTCOME AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: AN INTENT TO TREAT ANALYSIS WITH 95% FOLLOW UP RATE AT 10 YEARS**
Robert Caiazzo
- A-255-P ROUX EN Y GASTRIC BYPASS REVERSALS**
Susan Kartiko

*Confirmed Poster of Distinction at time of printing. See final list in Program Changes.

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TOP POSTERS

A-101-P **PREDICTORS OF READMISSION AFTER LAPAROSCOPIC GASTRIC BYPASS: AN ANALYSIS OF 9,593 PATIENTS FROM THE NATIONAL SURGICAL QUALITY IMPROVEMENT PROGRAM (NSQIP).**

Steven Elliott, MD; Matthew Y Lin, MD; Jennifer Kaplan, MD; Christina M Spina, PA-C MPH; Andrew Posselt, MD, PhD; John P Cello, MD; Stanley Rogers, MD; Jonathan T Carter, MD

A-102-P **ONE YEAR OUTCOMES OF SLEEVE GASTRECTOMY IN PEDIATRIC VS. ADULT PATIENTS**

Melissa B Bagloo, MD; Mary F DiGiorgi, PhD; Beth A Schrope, MD; Miguel Silva, MD; Akuezunkpa O Ude Welcome, MD; Aaron Roth, MD; Talia Abecassis; Monica P Sangal; Marc Bessler, MD; Jeffrey L Zitsman, MD

A-103-P **A PROSPECTIVE RANDOMIZED CLINICAL TRIAL COMPARING REFLUX IN PATIENTS WHO HAVE HAD LONGITUDINAL SLEEVE GASTRECTOMY WITH POSTERIOR CRURAL REPAIR VS. WITHOUT POSTERIOR CRURAL REPAIR: 6 MONTH DATA**

Brad E Snyder, MD; Erik B Wilson, MD; Sheilendra Sm Mehta, MD; Todd Wilson; Kulvinder S Bajwa, MD

A-104-P **LAPAROSCOPIC MANAGEMENT OF SEVERE REFLUX AFTER SLEEVE GASTRECTOMY WITHOUT CONVERSION TO ROUX-EN-Y GASTRIC BYPASS**

Abdelkader Hawasli, MD; Susan M Szpunar, PhD; Bradley Hare, Ahmed A Meguid, MD; Alwyn Harriott, MD; Nagla Thatimatla

A-105-P **LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG): COHORT STUDY WITH 6 YEAR FOLLOW-UP**

Carmen Santander; Katherine Cuellar; Francisco Perez; Jorge Bravo; Ismael Court MD; Juan Eduardo Contreras, MD

A-106-P **COMPARISON OF SLEEVE GASTRECTOMY AGAINST ROUX EN Y GASTRIC BYPASS FOR PATIENTS ABOVE 50 YEARS-INTERIM AT THE END OF 1 YEAR:**

Praveen Raj, MS, DNB; C Palanivelu; Parimala Devi Kumara Swamy; MSc (UK) Registered Dietitian (UK)

A-107-P **LAPAROSCOPIC GASTRIC GREATER CURVATURE PLICATION VERSUS LAPAROSCOPIC SLEEVE GASTRECTOMY: EARLY OUTCOME IN 140 PATIENTS.**

Tamer N Abdelbaki, MD, MRCS; Mohamed MS SHARAAN, MD; Khaled Katri, MD

A-108-P **COMPARATIVE EFFECTIVENESS: MECHANISMS OF DIABETES RESOLUTION AFTER WEIGHT LOSS SURGERY**

John M Morton, MD; Chris Crowe; Natalia Leva; Homero Rivas, MD

A-109-P **INFLUENCE OF SURGEON OPERATIVE TIME ON POST-OPERATIVE COMPLICATIONS FOLLOWING LAPAROSCOPIC GASTRIC BYPASS**

Daniel Bacal, MD; Bradley N Reames, MD; Arthur M Carlin, MD; Abdelkader Hawasli, MD; Jon L Schram, MD; Matthew J Weiner, MD; Jeffrey A Genaw, MD; Nancy J Birkmeyer, PhD; Jonathan F Finks, MD

A-110-P **PROSPECTIVELY VALIDATED PREDICTION OF WEIGHT LOSS AND MORBID OBESITY CO-MORBIDITIES AFTER OPEN AND LAPAROSCOPIC GASTRIC BYPASS, ADJUSTABLE GASTRIC BAND, SLEEVE GASTRECTOMY AND DUODENAL SWITCH: MODELING ON DATA FROM 166,601 BOLD PATIENTS**

Gus J Slotman, MD

A-111-P **LAPAROSCOPIC GASTRIC BYPASS VS. SLEEVE GASTRECTOMY IN THE SUPER-OBESE PATIENT: EARLY OUTCOMES OF AN OBSERVATIONAL STUDY**

Carlos Zerrweck, MD, Elisa M Sepulveda, MD, Antonio G Spaventa, MD, Erandeni I Fernandez, MD, Francisco J Campos, Hernan Maydan, MD

A-112-P **CONTEMPORARY BARIATRIC SURGERY RESULTS IN AN INTEGRATED HEALTH CARE DELIVERY SYSTEM**

Robert A Li, MD; David P Fisher, MD; Rebecca M O'Brien, MD; Sanjoy K Dutta, MD; Lynn Ackerson; Mike Sorel; Stephen Sidney, MD

A-113-P **IS PREOPERATIVE MANOMETRY NECESSARY IN EVALUATING REFLUX SYMPTOMS FOR SLEEVE GASTRECTOMY CANDIDATES?**

Andre Teixeira, MD; Rena Moon, MD; Christina M Mckee, ARNP; Muhammad A Jawad, MD

A-114-P **THE ANTIDIABETIC ACTION OF BARIATRIC SURGERY IS INDEPENDENT OF PROXIMAL INTESTINAL BYPASS, WEIGHT AND CHANGES IN THE GUT MICROBIOME: A PILOT STUDY IN AN OBESE DIABETIC MOUSE MODEL**

Shiri Li, MD, PhD; Kelly Vo, BS; Lourdes Robles, MD; Bryan J Boubion, BS; Stefan Jellbauer, PhD; Nina Gao; Manuela Raffatellu, MD; Ninh T Nguyen, MD; Alessio Pigazzi, MD

A-115-P **PSORIASIS IS IMPROVED AFTER BARIATRIC SURGERY**

Hector Romero Talamas, MD; Ali Aminian, MD; Esam S Batayyah, MD; Andrea Zelisko, MD; Matthew D Kroh, MD; Tomasz Ro Rogula, MD, PhD; Anthony P Fernandez, MD, PhD; Philip R Schauer, MD; Stacy A Brethauer, MD

COMPARATIVE TRIALS

A-116-P **DOES PRE-OPERATIVE INSULIN PREDICT POST SURGICAL WEIGHT LOSS FOLLOWING BARIATRIC SURGERY?**

Janet Ng, PhD; Andrea M Stone, BS; Delaina R Pedrick, Darren S Tishler, MD; Pavlos K Pappasavas, MD, FACS

A-117-P **WHO GETS WHICH OPERATION? PRE-OPERATIVE CLINICAL CHARACTERISTICS OF 166,601 BOLD PATIENTS WHO UNDERWENT OPEN (ORYGB) OR LAPAROSCOPIC (LAPRYGB) GASTRIC BYPASS, ADJUSTABLE GASTRIC BAND (AGB), SLEEVE GASTRECTOMY (SLEEVE), OR DUODENAL SWITCH**

Melanie Adams, DO; Gus J Slotman, MD

A-118-P **OUTCOMES OF PATIENTS WITH A BMI GREATER THAN 50 KG/M2 UNDERGOING BARIATRIC SURGERY**

Andrea M Stone, BS; Amanda Medoro; Janet Ng, PhD; Pavlos K Pappasavas, MD, FACS; Darren S Tishler, MD

A-119-P **FITNESS AND EXERCISE FOR POST-BARIATRIC PATIENTS (FEPP): PHYSICAL AND PSYCHOLOGICAL OUTCOMES FROM A RANDOMIZED TRIAL TESTING AN EXERCISE PROGRAM SPECIFICALLY DESIGNED FOR POST-BARIATRIC PATIENTS**

Karen Coleman, PhD; Susan L Caparosa, MA; Jeanne F Nichols, PhD; Ken Fujioka, MD; Kari N McCloskey, MS; Anny H Xiang, PhD; Susan S Levy, PhD; Corinna Koebnick, PhD

A-120-P **EVALUATION OF SLEEVE GASTRECTOMY WITH JEJUNAL BYPASS VERSUS ROUX-EN-Y GASTRIC BYPASS AND SLEEVE GASTRECTOMY WITH THE BARIATRIC ANALYSIS REPORT OUTCOME SYSTEM (BAROS)**

Matias Sepulveda; Munir J Alamo, MD; Nicolas Flores, MD; Ximena Prat; Nicolas Rosso

A-121-P **EXERCISE RECOMMENDATIONS SHOULD BE MODIFIED FOR POST-BARIATRIC PATIENTS TO ADJUST FOR FUNCTIONAL LIMITATIONS**

Karen Coleman, PhD; Susan L Caparosa, MA; Susan S Levy, PhD; Jeanne F Nichols, PhD; Ken Fujioka, MD; Corinna Koebnick, PhD; Kari N McCloskey, MS; Anny H Xiang, PhD

EMERGING MEDICAL TECHNOLOGIES

A-122-P **SINGLE INCISION MULTIPOINT LAPAROSCOPIC BARIATRIC SURGERY: ERGONOMIC PRINCIPLES**

Praveen Raj, MS, DNB; C Palanivelu

A-123-P **ENDOSCOPIC GASTRIC PLICATION USING THE ARTICULATING CIRCULAR ENDOSCOPIC (ACE) STAPLER: RESULTS OF A MULTI-CENTRIC PROSPECTIVE NON-RANDOMIZED PHASE I TRIAL.**

Laurent D Biertho, MD; Stefane Lebel; Fredric Simon Hould; Simon Marceau, MD; Odette Lescelleur; Santiago Horgan, MD; Pablo E Omelanczuk, MD; Rodrigo Ongay; Natalia Pampillon; Ceci Penutto; Vivi Lasagni; Sonia Omelanczuk; Alejandro L Grigaites, MD; Rudolf Buxhoeveden, MD; Maria V Gorodner, MD; Erwin ES Santo, MD; Sigal Fishman; Nicole Bouvy; J Conchillo, MD PhD; Givan Paulus; Mark van Avesaat, MD; T Verlaan; Paul Fockens; Simon Biron, MD, MSc; Magali M Sanchez, MD

A-124-P **CONTINUOUS NON-INVASIVE ASSESSMENT OF HEMOGLOBIN AND VOLUME STATUS: DOES OBESITY AND ABDOMINAL INSUFFLATION AFFECT ACCURACY AND RELIABILITY?**

Mia D DeBarros; Marlin W Causey, MD; Patrick Chesley, MD; Matthew J Martin, MD

A-125-P **ROBOT ASSISTED SLEEVE GASTRECTOMY IN MORBIDLY OBESE VS. SUPER OBESE: INITIAL EXPERIENCE**

Vivek Bindal, MS, DNB, FNB (MAS); Parveen PB Bhatia, MD; Sudhir Kalhan, MS; Mukund Khetan, MS; Suviraj John, MBBS MS DNB FNB FIAGES; Rahul R Singh, MD

A-126-P **SAFETY OF BARIATRIC SURGERY IN CIRRHOTIC PATIENTS**

Tallal M Zeni, MD; Sheila Thompson; Jacob E Roberts, DO

A-127-P **NOTES-INSPIRED SLEEVE GASTRECTOMY**

Elie Chouillard

POSTERS

A-128-P ENDOSCOPIC PLICATION OF THE SLEEVE: A NOVEL APPROACH FOR THE GASTRIC SLEEVE REVISIONS

George M Eid, MD

A-129-P SLEEVE GASTRECTOMY WITH JEJUNAL BYPASS. 9 YEARS OF HISTORY OF A MORE PHYSIOLOGICAL ALTERNATIVE TO ROUX-EN-Y GASTRIC BYPASS

Munir J Alamo, MD; Matias Sepulveda; Cristian A Astorga, MD; Hernan Guzman, MD; Leandro Sepulveda; Juan Pablo Hermosilla; Andrea Sepulveda, MD

GASTRIC BANDING

A-130-P INITIAL EXPERIENCE IN LAPAROSCOPIC GASTRIC PLICATION (LGP) STUDY PROTOCOL AND MID-TERM FOLLOW-UP

Carmen Santander; Juan Eduardo Contreras, MD; Diva Y Villao; Ismael Court, MD; Jorge Bravo; Francisco Perez; Katerine Cuellar

A-131-P LONG TERM OUTCOMES OF LAPAROSCOPIC GASTRIC BANDING AT A SINGLE INSTITUTION

David M Parker, MD; Amrit Rambhajan, MD; Anna Ibele, MD; Jon D Gabrielsen, MD; Anthony T Petrick, MD; Matthew E Plank, PA-C

A-132-P ADOLESCENTS DEMONSTRATE PARTIAL CARDIOVASCULAR RISK REDUCTION AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING SURGERY IN THE CONTEXT OF UNCHANGED FITNESS LEVELS

Thao-Ly T Phan; George A. Datto, MD; Lauren L. Falini, BS; Kirk W. Reichard, MD; Samuel S. Gidding, MD

A-133-P LONG TERM OUTCOME AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: AN INTENT TO TREAT ANALYSIS WITH 95% FOLLOW UP RATE AT 10 YEARS

Robert Caiazzo; Freidric Branger; Helene Verkindt; Adrien Sterkers; Fanelly Torres; Raphael Degremont, MD; Marie Pigeyre; Francois Pattou, MD

A-134-P PREOPERATIVE PREDICTORS OF EXCESS BODY WEIGHT LOSS IN ADOLESCENTS FOLLOWING LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING

Lauren Orr; Mireya Montalvan-Panzer, MSHS, CCRC; Jeffrey L Zitsman, MD

A-135-P LAPAROSCOPIC ADJUSTABLE GASTRIC BAND (LAGB) IS ASSOCIATED WITH BETTER PERCENTAGE EXCESS WEIGHT LOSS (%EBWL) IN PATIENTS WITH BODY MASS INDEX (BMI) < 40. AN EXPERIENCE WITH 1115 PATIENTS.

Ashraf Haddad, MD; Scott Aldrich, MS; Murad Bani Hani, MD; Kuldeep Singh, MD; Andrew M Averbach, MD

A-136-P MIDTERM RESULTS FOR LAPAROSCOPIC GASTRIC BANDING TREATMENT OF MORBID OBESITY IN A MEDICAL UNIVERSITY HOSPITAL

Shu-Chen Wei, RN; Weu Wang, MD; Yiu-Shun Tong, MD; Ichi Cheng, RD

A-137-P BARIATRIC SURGERY IN PATIENTS OVER THE AGE OF 70

Andrea M Stone, BS; Pavlos K Pappasavas, MD, FACS; Michael Hernon; Janet Ng, PhD; Darren S Tishler, MD

A-138-P REOPERATIONS FOLLOWING LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING

David Chiapaikoe, MD; Bogdan Protyniak, MD; Molly Schultheis, MD; Paul M Pearce, MD; Frank J Boraa, MD

A-139-P PREOPERATIVE CHARACTERISTICS AND POSTOPERATIVE SAFETY OF LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING SURGERY FOR LOWER BMI COMPARED TO MID AND HIGHER BMI

Minyoung Cho, MD PhD; Bodri Son, MD; Eoh Kyoung Nam, MD; Ho Yeon Kim, MD; Jung Eun Kim, MD; Gyu Hee Chae, MD; Ha Jin Kim, MD; Jae Yong So, MD; Sun Ho Lee, MD; Nam Chul Kim

A-140-P AUGMENTED INITIAL WEIGHT-LOSS OUTCOMES IN WOMEN AND NON-DIABETICS ARE NOT SUSTAINED LONG TERM AFTER LAGB

Adrian G Dan, MD FACS; Ashley N Bohon, MA; Noelle M Bothe, MSN, FNP-BC, CBN; Debbie Pasini, RN; Mark Pozsgay, DO; John G Zografakis, MD

A-141-P PREDICTIVE FACTORS OF FAILURE AND SUCCESS AFTER LAPAROSCOPIC GASTRIC BANDING FOR MORBID OBESITY

Raul J Rosenthal, MD; Abraham Bentacourt, MD; Miguel Lamota, MD; Emanuele Lo Menzo, MD, PhD; Samuel Szomstein, MD; Pablo Marin, MD

A-142-P FIVE YEAR OUTCOMES OF A TELEMETRIC ADJUSTABLE GASTRIC BAND (AGB) STUDY

Nicolas V Christou, MD

A-143-P FOLLOWUP OF PATIENTS WHO HAD GASTRIC BAND SURGERY

Pablo E Omelanczuk, MD; Martin MB Berducci, MD; Magali M Sanchez, MD; Natalia Pampillon; Cecilia Penutto; Viviana Lasagni

A-144-P YOU CAN'T ALWAYS GET WHAT YOU WANT: GASTRIC BAND TO SLEEVE TO BYPASS, THE ULTIMATE BARIATRIC EXPERIENCE

Andrea M Stone, BS; Janet Ng, PhD; Darren S Tishler, MD; Pavlos K Pappasavas, MD, FACS

A-145-P LAGB for PCOD, INFERTILITY OBESE FEMALES: WAS IT THE RIGHT CHOICE?

Poonam S Shah, MD; Pallavi N Shah; Jayashri R Gangwani; Shashank S Shah, MS;

A-146-P DOES BAND PRESSURE PROVIDE A MEANINGFUL PARAMETER TO DIRECT ADJUSTMENT OF A LAPBAND?

Terry L Simpson, MD FACS; John O'Dea, BE MED MSc PhD; Adrian McHugh, MSc; Madison Wellborn; Clay Wellborn, MD

A-147-P RADIOLOGICAL IMAGING & COMPLICATIONS IN LAP-BAND PATIENTS

H. J Naim, MD; Carolyn L Taylor, MS PA-C; Darya Famininy

A-148-P LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB): LONG TERM FOLLOW UP

Carmen Santander; Juan Eduardo Contreras, MD; Ismael Court, MD; Francisco Perez; Jorge Bravo; Katerine Cuellar; Diva Y Villao

A-149-P COMPARISON OF LAPAROSCOPIC GREATER CURVE PLICATION AND LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING WITH GREATER CURVE PLICATION: WEIGHT LOSS AND RESOLUTION OF CO-MORBIDITIES AT 6 MONTHS

Aliyah Kanji; Luke M Funk, MD MPH; Dean J Mikami, MD; Sabrena F Noria, MD PhD; Bradley J Needleman, MD

GASTRIC BYPASS

A-150-P COMPARISON OF COMPLICATION RATES AND WEIGHT LOSS OUTCOMES AMONG LINEAR STAPLER, HAND SEWN AND CIRCULAR STAPLER GASTROJEJUNOSTOMY TECHNIQUES IN ROUX EN-Y GASTRIC BYPASS

Michael G Sarr, MD; Tarek M Waked, MD; Wael Khreiss; Michael L Kendrick, MD; Todd A Kellogg, MD; Florencia G Que, MD

A-151-P LENGTH OF THE ROUX LIMB IN ROUX-EN-Y GASTRIC BYPASS AND ITS EFFECT ON WEIGHT LOSS: A SINGLE INSTITUTION REVIEW

Wael Khreiss; Tarek Waked, MD; Mafi Parham; Michael L Kendrick, MD; Todd A Kellogg, MD; Michael G Sarr, MD; Florencia G Que, MD; William S Harmsen, MS

A-152-P RAPID PROGRESSION OF NASH CIRRHOSIS REQUIRING LIVER TRANSPLANTATION A FEW MONTHS AFTER ROUX-EN-Y GASTRIC BYPASS

Mofei Liu, MD; Colin Swales, MD; Andrea M Stone, BS; Janet Ng, PhD; Darren S Tishler, MD; Pavlos K Pappasavas, MD, FACS

A-153-P PREVALENCE AND IMPLICATIONS OF CIGARETTE SMOKING IN MORBIDLY OBESE PATIENTS UNDERGOING BARIATRIC SURGERY

Raul J Rosenthal, MD; Abraham Abdemur, MD; Pablo Marin, MD; Emanuele Lo Menzo, MD, PhD; Samuel Szomstein, MD

A-154-P DISCHARGE ON POSTOPERATIVE DAY ONE IS SAFE AND FEASIBLE IN SELECTED PATIENTS AFTER LAPAROSCOPIC ROUX-Y GASTRIC BYPASS

Amrit Rambhajan, MD; David M Parker, MD; Anna Ibele, MD; Jon D Gabrielsen, MD; Anthony T Petrick, MD

A-155-P DOES TIGHTER PERIOPERATIVE HEMOGLOBIN A1C REGULATION PREDICT BETTER OUTCOMES AFTER PRIMARY BARIATRIC SURGERY?

Angela Corea, MD; Loanne Faulstich-Fox, NP; Leslie M Schuh, PhD; Natasha Morris, MD; Brenda M Cacucci, MD; David Diaz, MD; Christopher M Evanson, MD; John M Huse, MD; Margeret Inman, MD; Douglas J Kaderabek, MD

A-156-P EARLY COMPLICATION RATES IN A SINGLE-SURGEON SERIES OF 195 ROBOTIC-ASSISTED ROUX-EN-Y GASTRIC BYPASS

Christopher J You, MD; Avishai J Meyer, MD

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- A-157-P PRESENCE OF FOOD IN THE EXCLUDED STOMACH VIA EXCLUDED JEJUNUM? AN OLD CAUSE OF WEIGHT REGAIN IN A NEW WAY? SCINTIGRAPHIC STUDY OF A MEAL "GOING WHERE NO ONE HAS GONE BEFORE".**
Fabio Viegas, MD; Pedro Worms, MD; Luciana Vilela, MD; Paulo Silveira, MD; Jose Pinna Cabral, MD
- A-158-P SHORT-TERM RESULTS OF LAPAROSCOPIC GASTRIC BYPASS IN CHINESE PATIENTS WITH BMI 60 KG/ M2**
Cunchuan Wang, MD, PhD; Wah Yang, MD; Jingge Yang, MD
- A-159-P GASTRIC BYPASS WITHOUT CLOSURE OF THE MESENTERIC DEFECTS MAY NOT LEAD TO INCREASED RATE OF INTERNAL HERNIA OR BOWEL COMPROMISE**
Radomir Kosanovic, MD; Rey J Romero, MD; Rupa Seetharamaiah, MD; Jorge R Rabaza, MD, FACS, FASMBS; Anthony M Gonzalez, MD, FASC, FAMBS
- A-160-P LAPAROSCOPIC GASTRIC BYPASS IN POOR AND RICH PATIENTS IN BRAZIL. WHAT'S THE DIFFERENCE?**
Cid A Pitombo, MD MS PhD; Cezar Pitombo, MD; Mariana Bacha; Alessandra Soeiro
- A-161-P ROBOTIC ROUX-EN-Y GASTRIC BYPASS FOR MORBID OBESITY: SHORT-TERM OUTCOMES AND COMPARATIVE ANALYSIS**
Esam S Batayyah, MD; Ali Aminian, MD; Hector Romero-Talamas, MD; Andrea Zelisko, MD; Philip R Schauer, MD; Rogula Ro Tomasz, MD
- A-162-P CLINICAL EVALUATION OF FIBRIN SEALANT DURING LAPAROSCOPIC GASTRIC BYPASS: A RETROSPECTIVE COMPARATIVE STUDY.**
Anthony M Gonzalez, MD, FACS, FAMBS; Ignacio Danta, BS, RPFT, CRC; Radomir Kosanovic, MD; Rey J Romero, MD; Jorge R Rabaza, MD, FACS, FASMBS
- A-163-P SAFETY AND EFFECTIVENESS OF ROUX-EN-Y GASTRIC BYPASS IN PATIENTS UNDER THE AGE OF 20**
Christopher DuCoin, MD; Mertalaine Mulatre; Rena Moon, MD; Andre Teixeira, MD; Muhammad A Jawad, MD
- A-164-P CORRELATION BETWEEN FOOD PREFERENCE AND WEIGHT LOSS AFTER GASTRIC BYPASS**
Marcus V Martins, MD; Jose Luis P Falcao; Marcio Cavaliere; Luiz Carlos Pereira
- A-165-P COGNITIVE FUNCTION FOLLOWING BARIATRIC SURGERY: EVIDENCE FOR IMPROVEMENTS 3 YEARS POST-SURGERY**
Michael Alosco; Rachel Galimoto; Mary Beth Spitznagel; Gladys W Strain, PhD; Michael J Devlin, MD; Ronald Cohen; Ross D Crosby; John Gunstad
- A-166-P GASTRIC BYPASS IMPROVES RENAL TRANSPLANT CANDIDACY**
Joshua C Coursey, MD; Vadim Sherman, MD; Nabil Tariq, MD; Lee M Morris, MDI
- A-167-P TECHNICAL FACTORS ASSOCIATED WITH ANASTOMOTIC LEAK IN LABS**
Mark D Smith, MBChB FRACS; Emma J Patterson, MD; Abdus Wahed, PhD; Abidemi K Adeniji, PhD; William Chapman, MD; Anita P Courcoulas, MD MPH; Gregory Dakin, MD, FACS; David R Flum, MD, MPH, FACS; Carol A McCloskey, MD; James E Mitchell, MD; Alfons Pomp, MD; Myrlene Staten, MD; Bruce M Wolfe, MD;
- A-168-P LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IS A SAFE AND EFFECTIVE OPTION FOR TREATING MORBID OBESITY IN OLDER PATIENTS.**
Waleed Al-Khyatt, MD; Corniche Khan; Sinduja Lakkunarajah; Javed Ahmed
- A-169-P SUBSTANTIAL LONG-TERM BENEFICIAL IMPACT OF ROUX-EN-Y GASTRIC BYPASS (RYGB) ON HYPERTRIGLYCERIDEMIA (HTG) IS TEMPERED BY DISCONTINUING HYPOLIPIDEMIC MEDICATION IN PATIENTS WITH PRE-OPERATIVE UNCONTROLLED HTG.**
John Cheregi; Junlin Liao, PhD; Tyler Latcham; Judy Swift, RN, MSN; Jessica Smith; Isaac Samuel, MD
- A-170-P OPERATIVE TECHNIQUE SIGNIFICANTLY AFFECTS THE INCIDENCE OF MARGINAL ULCER FORMATION IN PATIENTS UNDERGOING RYGB**
Krista L Haines, DO; Christopher J Myers, MD
- A-171-P HYPERAMMONEMIA A RARE COMPLICATION OF GASTRIC BYPASS**
Deep Goel; Chetan Merchant; Virandera Pal Bhalla, MS
- A-172-P COMPLICATIONS DO NOT AFFECT WEIGHT-LOSS AFTER LRYGB**
John M Marton, MD; Chris Crowe; Natalia Leva
- A-177-P COMBINING LAPAROSCOPIC GIANT PARAESOPHAGEAL HERNIA REPAIR WITH SLEEVE GASTRECTOMY IN OBESE PATIENTS**
Ankit Patel, MD; Nathaniel Lytle; Juan P Toro, MD; John F Sweeney, MD; Jahnvi Srinivasan, MD; Edward Lin, DO; S. Scott Davis, MD
- A-178-P ESTABLISHING AN AMBULATORY HYDRATION CLINIC TO DECREASE READMISSION RATE AFTER BARIATRIC SURGERY**
Ali Aminian, MD; Sandra Sykes, BSN, MPM, CPHQ; Steve Booth, RN BSN; Sherelle L Tucker, MBA; Nancy Anzlovar, RN; Mary Ellen Satava, RN; Philip R Schauer, MD; Stacy A Brethauer, MD
- A-179-P HOW CAN YOU EXERCISE IF YOUR FEET HURT? PLANTAR FASCIITIS IN THE BARIATRIC POPULATION AND THE EFFECT OF WEIGHT LOSS SURGERY**
Andrea Zelisko, MD; Hector Romero Talamas, MD; Esam S Batayyah, MD; Ali Aminian, MD; Philip R Schauer, MD; Stacy A Brethauer, MD; Kevin El-Hayek, MD; Matthew D Kroh, MD
- A-180-P IMPACT OF PRE-OPERATIVE WEIGHT LOSS ON BARIATRIC SURGICAL OUTCOMES**
Mustafa Al-Shammari; Ali Ardestani; Scott A Shikora, MD; Malcolm Kenneth K Robinson, MD; Ashley Haralson Vernon, MD; Ali Tavakkoli
- A-181-P INCIDENCE OF EMOTIONAL CHANGE IN THE INDIVIDUAL IN THE FAMILY EMOTIONAL SYSTEM COINCIDENT TO INITIATION OF BARIATRIC SURGERY**
Kathleen J Sheffield, MS, RD, LMFT; Deron J Ludwig, MD; Erik J Simchuk, MD, FASMBS
- A-182-P IS AGE OF OBESITY ONSET A DETERMINANT IN WEIGHT LOSS AFTER BARIATRIC SURGERY?**
Maureen E Miletics, RN, BSN, MS, CBN; Maher El Chaar, MD, FACS, FASMBS; Leonardo Claros, MD, FACS, FASMBS; Jill Stoltzfus, PhD; Terri L Davis, RN; Dorothy T McFadden, MA, RD, LDN; Barbara E Migliaccio, MA, MSW, LCSW, LCADC, CBCS; Nancy Velazquez, MSW, LSW; Lisa Musician, RD, LDN
- A-183-P ROLE OF COLONOSCOPY IN THE WORKUP OF BARIATRIC SURGERY PATIENTS**
Abdelrahman A Nimeri, MD; Mohammed B Hadad, MD; Nidal Dehni, MD
- A-184-P LONG TERM RESULTS OF LAPAROSCOPIC SLEEVE GASTRECTOMY AND ROUX-EN-Y GASTRIC BYPASS IN ADOLESCENT PATIENTS**
Raul J Rosenthal, MD; Yaniv Cozacov, MD; Mayank Roy, MD; Emanuele Lo Menzo, PhD; Samuel Szomstein, MD; Savannah I Moon, DO
- A-185-P FUNCTIONAL WALKING CAPACITY AS MEASURED BY THE SIX-MINUTE WALK TEST (6MWT): CORRELATION WITH EARLY WEIGHT LOSS AFTER SLEEVE GASTRECTOMY**
Dan Eisenberg, MD; Eric Hardin; Cheryl Bates

GENERAL INTEREST

- A-173-P RISKS AND BENEFITS OF ROUX-EN-Y GASTRIC BYPASS AND LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING IN PATIENTS OLDER THAN 60 YEARS.**
Francois Pattou, MD; Claire Blanchard; Robert Caiazzo; Helene Verkindt; Marie Pigeyre
- A-174-P OUTCOMES OF BARIATRIC SURGERY IN MORBIDLY OBESE PATIENTS INFECTED WITH THE HUMAN IMMUNODEFICIENCY VIRUS**
Raul J Rosenthal, MD; Abraham Betancourt, MD; Pablo Marin, MD; Emanuele Lo Menzo, MD, PhD; Samuel Szomstein, MD; Carolina Ampudia, MD
- A-175-P ROUTINE PREOPERATIVE ESOPHAGOGASTRODUDENOSCOPY HAS HIGH DIAGNOSTIC YIELD IN BARIATRIC SURGERY PATIENTS**
Cunchuan Wang, MD, PhD; Wah Yang, MD; Jingge Yang, MD
- A-176-P EXCELLENCE CAN BE ACHIEVED IN "LOW VOLUME" BARIATRIC SURGERY CENTERS; A SINGLE CENTER EXPERIENCE.**
Kristin A Robinson, MD; James Madura; Kristi Harold; Yu-Hui H Chang, MPH, PhD; Tonya Benjamin, MSN NP-C; Sophie Bersoux, MD MPH

POSTERS

- A-186-P BARIATRIC SURGERY FOR ADOLESCENT OBESITY: A SYSTEMATIC REVIEW OF 1,322 PATIENTS**
Matthew Boelig, Joy L Collins, MD; Sanjiv Mehta, BS; Elizabeth P Parks, MD, FAAP, MSCE; Noel N Williams, MB, BCh, MCh, FRCSI, FRCS; Rajesh Aggarwal, MD PhD MA FRCS
- A-187-P LIPOSOME-BASED BUPIVACAINE LOCAL INFILTRATION OF THE SURGICAL SITES EFFECTIVELY REDUCES POSTSURGICAL OPIOID REQUIREMENTS FOLLOWING LAPAROSCOPIC BARIATRIC PROCEDURES**
Andras Sandor, MD; Jennifer M Lane, MD; Christine H Williams, RN MSN ACNP; Ruchit Marfatia, BS, MSCR, PharmD; Erin A Carey, PharmD; Nicole J Clark, PharmD, BCPS
- A-188-P EFFECTS OF A TELEPHONIC BARIATRIC SURGERY CARE MANAGEMENT PROGRAM AMONG COMMERCIALY INSURED MEMBERS**
Kael Haig; Wade Bannister, PhD
- A-189-P SAFETY OF BARIATRIC SURGERY IN PATIENTS OVER THE AGE OF 60**
Aviv Ben-Meir, MD; Audrea Oaks, PA-C; Brooke M Perlik, PA-C RD LD
- A-190-P THE VALUE OF CONCURRENT DATABASE MANAGEMENT ON INTERVENTIONS AND OUTCOMES: A TALE OF TWO STAPLING TECHNIQUES**
Troy M Glembot, MD MBA CPE FACS FASMBS; Tina L Shelton, MSN RN CBN; Patrick G Northcraft, FNP-C; Sandra B Snider, CST, BSCR
- A-191-P IMPROVEMENT OF INFLAMMATORY BOWEL DISEASE AFTER SURGICAL WEIGHT LOSS**
Ali Aminian, MD; Jennifer Mackey, RN; Matthew D Kroh, MD; Bipan Chand, MD; Tomasz Ro Rogula, MD, PhD; Stacy A Brethauer, MD; Philip R Schauer, MD
- A-192-P IS LOST TO FOLLOW-UP AFTER GASTRIC BYPASS ASSOCIATED WITH POOR LONG-TERM GLYCEMIC OUTCOME?**
Ali Aminian, MD; Jennifer Mackey, RN; Esam S Batayyah, MD; Hector Romero-Talamas, MD; Andrea Zelisko, MD; Derrick C Cetin, DO; John P Kirwan, PhD; Sangeeta Kashyap, MD; Stacy A Brethauer, MD; Philip R Schauer, MD
- A-193-P EFFECTIVENESS OF AGGRESSIVE HIGH RISK VENOUS THROMBOEMBOLISM SCREENING IN PREVENTION OF PERIOPERATIVE PULMONARY EMBOLISM.**
Laura B Barnes, MD; Danny Chan; Charlotte Hodges, MD; Jaryd Stein; Wade N Barker, MD
- A-194-P PREOPERATIVE PLACEMENT OF RETRIEVABLE INFERIOR VENA CAVA FILTERS IN THE HIGH RISK VENOUS THROMBOEMBOLISM SUBSET OF BARIATRIC SURGERY PATIENTS.**
Danny Chan; Jaryd Stein; Wade N Barker, MD; Laura B Barnes, MD; Charlotte Hodges, MD
- A-195-P MULTIDIMENSIONAL LEARNING CURVE OF ROBOTIC GASTRIC BYPASS IN MORBID OBESITY**
Ali Aminian, MD; Esam S Batayyah, MD; Hector Romero-Talamas, MD; Philips Damilola; Tomasz Ro Rogula, MD, PhD
- A-196-P VALIDITY OF SELF-REPORTED WEIGHTS FOLLOWING BARIATRIC SURGERY IN THE LABS-2 COHORT**
Nicholas J Christian, PhD; Wendy C King, PhD; Susan Z Yanovski, MD; Marc Bessler, MD; Anita P Courcoulas, MD MPH; Luis Garcia, MD FACS; Saurabh Khandelwal, MD; John R Pender, MD; Sheila Pierson, BS, BA; Walter J Pories, MD; Beth A Schroppe, MD; Bruce M Wolfe, MD
- A-197-P LAPAROSCOPIC GASTRIC PPLICATION.SHORT-TERM OUTCOME IN PRIVATE PRACTICE**
Miguel A Dorantes, MD
- A-198-P PREVIOUS BARIATRIC SURGERY MAY HAVE A BENEFIT IN TRAUMA PATIENTS**
Kogulan Nadesakumaran; Jane E McCormack, RN; Dana Telem; Aurora D Pryor, MD
- A-199-P INTRAOPERATIVE FACTORS EFFECTING CONVERSION AND PROCEDURE SELECTION IN LAPAROSCOPIC BARIATRIC SURGERY**
Justin Lea, BS; Peter F Lalor, MD
- A-200-P RETROSPECTIVE ANALYSIS OF ENOXAPARIN IN THE POSTOPERATIVE BARIATRIC PATIENT.**
Luke Kinsinger, MD; Oliver C Whipple, MD
- A-201-P PROPER KOREAN IDEAL BODY WEIGHT FORMULA AS A POSTOPERATIVE REPORTING TOOL OF WEIGHT LOSS AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING.**
Minyoung Cho, MD PhD; Bodri Son, MD; Kyoung Nam Eoh, MD; Hoyeun Kim, MD; Jeoung Eun Kim, MD; Kyu Hee Chae, MD; Ha Jin Kim, MD; Jae Yong So, MD; Sun Ho Lee, MD; Namchul Kim, MD
- A-202-P WEIGHT LOSS DEVICES FOR OBESE CHILDREN - WHERE ARE THEY?**
Allen F Browne, MD; Ai-Xuan L Holterman, MD; Nancy T Browne, RN MS PNP CBN
- A-203-P MULTIDIMENSIONAL ANALYSIS OF THE LEARNING CURVE FOR LAPAROSCOPIC GASTRIC PPLICATION**
Ali Aminian, MD; Hector Romero-Talamas, MD; Matthew D Kroh, MD; Stacy A Brethauer, MD; Philip R Schauer, MD
- A-204-P GASTROINTESTINAL STROMAL TUMORS (GISTS) INCIDENTALLY FOUND DURING BARIATRIC OPERATIONS: SIX CASES AT AN ACADEMIC BARIATRIC CENTER**
Luciano Fiszler, MD; Eric Bour, MD; Patricia L Eichhorn, MD; Ed Rapp, MD; John D Scott, MD
- A-205-P CITATION CLASSICS: TOP 50 CITED ARTICLES IN BARIATRIC AND METABOLIC SURGERY**
Ali Aminian, MD; Stacy A Brethauer, MD; Philip R Schauer, MD
- A-206-P PREOPERATIVE WEIGHT LOSS DOES NOT PREDICT OUTCOMES AFTER BARIATRIC SURGERY FOR MORBID OBESITY.**
Raul J Rosenthal, MD; Yaniv Cozacov, MD; Samuel Szomstein, MD; Emanuele Lo Menzo, MD, PhD; Fernando FD Dip, MD
- A-207-P USE OF A FLIP ROOM PROTOCOL FOR SIGNIFICANT INCREASE IN SURGERY VOLUME**
Sharon A Krzyzanowski, RN; Keith C Kim, MD, FACS; Cynthia K Buffington, PhD
- A-208-P DO CONCURRENT PROCEDURES PERFORMED AT TIME OF BARIATRIC SURGERY AFFECT PROCEDURAL SAFETY?**
Janet Ng, PhD; Andrea M Stone, BS; Daniel Mullins, MD; Pavlos K Pappasavas, MD, FACS; Darren S Tishler, MD
- A-209-P OPIOID-BASED ANESTHESIA IN BARIATRIC SURGERY FOR MORBIDLY OBESE PATIENTS. IS IT A SAFE TECHNIQUE?**
Emma Lopez, MD; Bernardo J Gutierrez-Sougarret, MD; Hugo Sanchez, MD; Maureen M Mosti, RN; Miguel F Herrera, MD PhD; Guillermo Dominguez-Cherit, MD
- A-210-P AN ANALYSIS OF PRE-SURGICAL PATIENT VARIABLES THAT AID IN THE PREDICTION OF POST-SURGICAL MALADAPTIVE COMPLIANCE**
Genna Hymowitz, PhD; Dina Vivian, PhD; Jenna L Adamowicz, MA; Aurora D Pryor, MD; Elizabeth Olsen
- A-211-P PSYCHOLOGICAL STATE OF BARIATRIC SURGERY CANDIDATES**
Pablo E Omelanczuk, MD; Viviana Lasagni; Natalia Pampillon; Magali M Sanchez, MD; Cecilia Penuto; Romina Palma
- A-212-P SURGICAL WEIGHT LOSS IN THE ELDERLY :: IS IT WORTH THE RISK?**
Jayashree S Todkar, MBBS MS DLS; Shashank S Shah, MBBS, MS; Poonam S Shah, MD
- A-213-P A CROSS-SECTIONAL STUDY OF SEXUAL FUNCTIONING, ATTITUDES, AND SATISFACTION OF LAPAROSCOPIC BANDING PATIENTS**
Mufaddal Mamawala, MPH; Farzin Ahmed, MPH; Susan F Franks, PhD; Adam B Smith, DO
- A-214-P THE MORBIDLY OBESE PATIENT WITH HEART FAILURE REQUIRING CARDIAC TRANSPLANTATION: IS THERE A ROLE FOR BARIATRIC SURGERY?**
Peter F Crookes, MD; Michael E Bowdish, MD
- A-215-P LEARNING CURVE FOR BARIATRIC SURGERY IN A SINGAPORE TERTIARY HOSPITAL**
Alvin KH Eng; Shanker Pasupathy; Sonali Ganguly; Hong Chang Tan; Kwang Wei Tham
- A-216-P FAT-FREE MASS IS NOT LOWER 24 MONTHS POST-BARIATRIC SURGERY THAN NON-OPERATED MATCHED CONTROLS.**
Gladys W Strain, PhD; Faith Ebel, MS, RD; Jamie Honohan, BA; Gregory Dakin, MD; Michel Gagner, MD; Alfons Pomp, MD; Dymna Gallagher, EdD
- A-217-P PREDICTORS OF SUCCESSFUL MEDICAL WEIGHT LOSS**
Maria Altieri, MD; Gerald J Gracia, MD; Dana Telem, MD; Catherine M Tuppo, PT, MS; Aurora D Pryor, MD
- A-218-P A NEW ASSESSMENT TOOL FOR ACCURATE CHARACTERIZATION OF SEVERITY OF DIABETES MELLITUS, HYPERTENSION, AND DYSLIPIDEMIA: A STUDY OF 3600 BARIATRIC SURGERY PATIENTS**
Aaron D Carr, MD; Rouzbeh Mostaedi, MD; Mohamed R Ali, MD

POSTERS

A-219-P IMPROVEMENT IN HIGH SENSITIVITY C-REACTIVE PROTEIN FOLLOWING BARIATRIC SURGERY AND CORRELATION TO HGBAIC

Jonathan A Schoen, MD; David Leopold, BA; John James, MD; Kevin B Rothchild, MD; Breana C Mitchell, MS

A-220-P LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS SURGERY OUTCOMES IN MEDICAID VS. NON-MEDICAID PATIENTS: A CASE-CONTROL STUDY

Luke M Funk, MD MPH; Andrew Suzo; Dean J Mikami, MD; Bradley J Needleman, MD

A-221-P BARIATRIC SURGERY IN THE ELDERLY OVER 60 YEARS: RESULTS AFTER SLEEVE GASTRECTOMY AND GASTRIC BYPASS

Pierre Fournier, MD; Fabienne Haroun; Dorian Verscheu; Rene Borscheid, MD; Lara Ribeiro-Parenti, MD; Denis Chosidow; Jean-Pierre Marmuse

MALABSORPTIVE PROCEDURES

A-222-P PROXIMAL VERSUS DISTAL LAPAROSCOPIC GASTRIC BYPASS IN SUPEROBESITY: PERIOPERATIVE RESULTS FROM A RANDOMIZED CONTROLLED TRIAL

Marius Svanevik, MD; Hilde Risstad, MD; Brita Solheim, MD; Tom Mala, MD, PhD; Rune Sandbu, MD; Jon A. Kristinsson, MD, PhD; Jaran Hjelmessath, Professor; Tor-Ivar Karlsen; Torgeir T Savik, MD, PhD; Carl Fredrik Schou, MD

A-223-P 5 YEAR WEIGHT LOSS AFTER BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH

Philippe A Topart, MD; Guillaume Becouarn, MD; Patrick Ritz, PhD

A-224-P BILIOPANCREATIC DIVERSION REQUIRES MULTIPLE VITAMIN AND MICRONUTRIENT ADJUSTMENTS WITHIN 2 YEARS OF THE SURGERY

Philippe A Topart, MD; Guillaume Becouarn, MD; Patrick Ritz, PhD; Agnes Salla, MD

A-225-P SINGLE STAGE ROBOTICALLY-ASSISTED LAPAROSCOPIC BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH. FIVE YEAR EXPERIENCE OF 179 PATIENTS

Iswanto Sucandy, MD; Gintaras Antanavicius, MD

A-226-P VENOUS THROMBOEMBOLISM AFTER LAPAROSCOPIC BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH. ANALYSIS OF 362 PATIENTS

Masoud Rezvani, MD; Iswanto Sucandy; Riva Das, MD; Mary Naglak; Gintaras Antanavicius, MD; Fernando Bonanni, MD

A-227-P PREVALENCE OF ANEMIA DURING THE FIRST YEAR AFTER ROUX-EN-Y GASTRIC BYPASS (RYGB)

Eduardo Del-Villar, MD; Yvette Neme-Yunes, MD; Diana Clavellina-Gaytan, MD; Juliana Baglietto-Azeredo, MD; Hugo Sanchez, MD; Miguel F Herrera, MD, PhD

A-228-P BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH CAN BE A SAFE OPERATION

Philippe A Topart, MD; Guillaume Becouarn, MD

A-229-P TOTALLY ROBOTIC BILIARY PANCREATIC DIVERSION WITH DUODENAL SWITCH

Ranjan Sudan, MD

METABOLIC SURGERY FOR DIABETES

A-230-P THE ROLE OF BARIATRIC SURGERY IN ACHIEVING THE STANDARDS OF MEDICAL CARE IN PATIENTS WITH TYPE 1 DIABETES

Osama Alsaied; Daniel B Leslie, MD; Sayeed Ikramuddin, MD

A-231-P THE 2 YEARS METABOLIC AND GLYCEMIC RESULTS OF LRYGB IN T2DM ASIAN PATIENTS

Jyotsna S Kulkarni, MD; Andrea Ooi Se En, MBBS, MS (Surgery); Ayham Ghinagow; Anirudh AV Vij, MD; Kirubakaran M Malapan, MBBS; Mohammed Saifulla Thuregal, MBBS, DNB-GEN SURG; Chih-Kun Huang, MD

A-232-P DIABETES SEVERITY SCORE (DSS) : A USEFUL TOOL TO ASSESS THE SEVERITY OF DIABETES, SELECT THE APPROPRIATE SURGICAL PROCEDURE AND PREDICT THE REMISSION OF DIABETES

Surendra Ugale, MBBS;

A-233-P RESULTS OF GASTRIC BYPASS (LGB) AND SLEEVE GASTRECTOMY (LSG) IN BARIATRIC POPULATION WITH TYPE 2 DIABETES MELLITUS: A COMPARATIVE STUDY

Carmen Santander; Juan Eduardo Contreras, MD; Ismael Court, MD; Jorge Bravo; Francisco Perez; Katerine Cuellar; Diva Y Villao

A-234-P COMPARATIVE STUDY OF METABOLIC SURGERY: LOOP DUODENOJEJUNOSTOMY WITH SLEEVE GASTRECTOMY VERSUS ROUX-EN-Y GASTRIC BYPASS IN TYPE II DIABETES MELLITUS PATIENTS

Andrea Ooi Se En, MBBS, MS (Surgery); Chang Po Chih, Huang Chih-kun

A-235-P DIABETES WITHOUT DRUGS: A REALITY FOR MOST AND FOR YEARS AFTER BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH

Fady Maustarah, MD MPH FRCSC;

A-236-P VERTICAL SLEEVE GASTRECTOMY: A POWERFUL TOOL FOR THE TREATMENT OF TYPE II DIABETES MELLITUS

Aviv Ben-Meir, MD; Brooke M Perlik, PA-C RD LD; Audrea Oaks, PA-C; Indukumar Sonpal, MD

A-237-P PREDICTING THE SUCCESS OF METABOLIC SURGERY: THE ABCD DIABETES SURGERY SCORE

Wei-Jei Lee, MD PhD; Kyung Yul Hur, MD, PhD; Muffazal Lakadawala; Kazunori Kasama, MD; Simon KH Wong; Kee Yuan Ngiam, MD

A-238-P GASTRO-INTESTINAL METABOLIC SURGERY FOR THE TREATMENT OF DIABETIC PATIENTS: A MULTI-INSTITUTIONAL INTERNATIONAL STUDY

Wei-Jei Lee, MD PhD; Kyung Yul Hur, MD, PhD; Muffazal Lakadawala; Kazunori Kasama, MD; Simon KH Wong; Kee Yuan Ngiam, MD

A-239-P FAILED SURGICAL WEIGHT LOSS DOES NOT NECESSARILY MEAN FAILED METABOLIC EFFECTS

Ali Aminian, MD; Hector Romero-Talamas, MD; Esam S Batayyah, MD; Jennifer Mackey, RN; Andrea Zelisko, MD; Derrick C Cetin, DO; John P Kirwan, PhD; Sangeeta Kashyap, MD; Stacy A Brethauer, MD; Philip R Schauer, MD

A-240-P IMPACT OF SLEEVE GASTRECTOMY ON WEIGHT AND INSULIN RESISTANCE IN MORBIDLY OBESE PATIENTS WITH AND WITHOUT DIABETES ONE YEAR POSTOPERATIVE.

Pablo E Omelanczuk, MD; Viviana Lasagni; Magali M Sanchez, MD; Cecilia Penutto; Natalia Pampillon; Martin MB Berducci, MD; Jorge Nefa

A-241-P LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS AND AFRICAN AMERICAN FEMALES WITH UNCONTROLLED TYPE 2 DIABETES MELLITUS

Delanya S Allen; Terrence Fullum, MD

A-242-P THE EARLY EFFECTS OF SLEEVE GASTRECTOMY COMPARED WITH GASTRIC BYPASS FOR THE LIPID PROFILE OF MORBIDLY OBESE PATIENTS

Mohey M Elbanna, MD; Osama F Abdelgawad, MBBS; Ahmad M Ibrahim, MD; Eman A Elgohary; Mohammed A Marzouk; Kamal M Elsayed

A-243-P A COMPARISON OF DIABETES AND INSULIN RESOLUTION AFTER ROUX-EN-Y GASTRIC BYPASS AND SLEEVE GASTRECTOMY

Tallal M Zeni, MD; Sheila Thompson; Amer Zeni, MD; Jacob E. Roberts, DO

A-244-P SLEEVE GASTRECTOMY IN TYPE 2 DIABETIC OBESE PATIENTS

Marcos A Berry, MD; Lionel Urrutia, MD; Patricio Lamoza; Rodolfo Lahsen, MD; Alvaro Bustos; Marco Schulz, MD

A-245-P WILL PHYSICIANS REFER DIABETIC AND OBESE PATIENTS FOR METABOLIC SURGERY IN SINGAPORE?

Asim Shabbir, MD; Hung Leng Kaan, Jimmy So; Davide Lomanto, MD, PhD; Amy YL Tay Yuh Ling, RN

A-246-P METABOLIC OUTCOMES OF BARIATRIC SURGERY IN A MULTIETHNIC COHORT IN SINGAPORE

Asim Shabbir, MD; Jimmy So; Khin Dr Thida Soe, MBBS; Litang Chen, RN; Davide Lomanto, MD, PhD; Amy YL Tay Yuh Ling, RN

A-247-P SINGAPORE DIABETIC PATIENT'S PERCEPTION OF METABOLIC SURGERY FOR TREATMENT OF TYPE II DIABETES MELLITUS

Asim Shabbir, MD; Jimmy So; Hui Wen Chua; Zhou Huijun, MBBS, MSc

NUTRITION

A-248-P THE MISSING D IN MORBID OBESITY

Paige Quintero; Cynthia Weber; Moshni Sivasubramanian; Sharfi Sarker, MD MPH

POSTERS

A-249-P TIME TO ELIMINATE LONG DURATION PREOPERATIVE MEDICALLY SUPERVISED WEIGHT LOSS: A MONEY LOSER WITHOUT CLINICAL BENEFITS

Kimberly S Maloomian, RD LDN; G. D Roye, MD; Beth A Ryder, MD; Sara E Metro, RD, LDN; Kellie C Armstrong, RN MS CBN; Suvithan Rajadurai; Sivamainthan Vithiananthan, MD

A-250-P IRON AND VITAMIN B12 DEFICIENCY ANEMIA AFTER SLEEVE GASTRECTOMY VERSUS ROUX-EN-Y GASTRIC BYPASS: A META-ANALYSIS

Sungsoo Park, MD; Emanuele Lo Menzo, MD PhD; Abraham Abdemur, MD; Samuel Szomstein, MD; Raul J Rosenthal, MD

A-251-P AGE OLD DEFICIENCY IN A NEW MILLENNIUM BARIATRIC PELLAGRA - NOT JUST NIACIN

Carol Wolin-Riklin, MA RD LD; Erik B Wilson, MD; Brad E Snyder, MD

A-252-P TOTAL ENERGY EXPENDITURE AND WEIGHT REGAIN AFTER ROUX-EN-Y GASTRIC BYPASS

Silvia L Faria, MS; Mariane M Cardeal, MD; Orlando P Faria, MD

A-253-P DOES A DIETITIAN IMPROVE BARIATRIC SURGERY OUTCOMES?

John M Morton, MD; Trit Garg; Natalia Leva; Homero Rivas, MD; Jessica Truong; Sarah Gleberman

A-254-P NUTRIENT INTAKE AND WEIGHT LOSS IN THE BARIATRIC SURGERY POPULATION UTILIZING THE NIH DIET HISTORY QUESTIONNAIRE II (DHQ II)

John M Morton, MD; Eric Wu; Natalia Leva

REVISIONAL PROCEDURES

A-255-P ROUX EN Y GASTRIC BYPASS REVERSALS

Susan Kartiko; Ramsey M Dallal, MD; Daniel R Cottam, MD; Fernando B Bonnani, MD

A-256-P LAPAROSCOPIC CONVERSION OF ADJUSTABLE GASTRIC BANDING TO SLEEVE GASTRECTOMY.

Agustin Duro, MD; Axel A Beskow, MD; Demetrio Cavadas, MD PhD

A-257-P THIRD TIME'S A CHARM? SUCCESS OF THE THIRD BARIATRIC SURGERY AFTER TWO SURGICAL FAILURES

Ali Aminian, MD; Jennifer Mackey, RN; Matthew D Kroh, MD; Tomasz Ro Rogula, MD, PhD; Bipan Chand, MD; Stacy A Brethauer, MD; Philip R Schauer, MD

A-258-P SURGICAL OUTCOMES OF REVISIONAL ROUX-EN-Y GASTRIC BYPASS (RRYGB).

Hugo Sanchez, MD; Eduardo Del-Villar, MD; Guillermo Dominguez, MD; Maureen M Mosti, RN; Miguel F Herrera, MD PhD

A-259-P OPEN, LAPAROSCOPIC AND ROBOTIC APPROACHES DURING BARIATRIC REVISIONS: A RETROSPECTIVE COMPARATIVE STUDY.

Rey J Romero, MD; Radomir Kosanovic, MD; Jonathan K Arad, MD; Jorge R Rabaza, MD, FACS, FASMBS; Anthony M Gonzalez, MD, FASC, FAMBS

A-260-P SINGLE-ANASTOMOSIS DUODENO-ILEAL BYPASS (SADI) AS A SECOND STEP AFTER SLEEVE GASTRECTOMY

Andres Sanchez-Pernaute, MD, PhD; Maria Conde Rodriguez; Maria Elia Perez Aguirre, MD, PhD; Miguel Angel Rubio Herrera, MD, PhD; Antonio J Torres, MD, PhD

A-261-P LAPAROSCOPIC REVISIONAL GASTROJEJUNOSTOMY FOR FAILED ROUX-EN-Y GASTRIC BYPASS: OUTCOMES AT 2 YEARS

Daniel Tran, MD; Batul H Al-zubeidy, MD; Abdul Rahman Hamdi, MD; Ian Woods, BS; Phillip Brown, BS; Christopher Julien, BS, MS2; Gezzer Ortega, MD, MPH; Nabeel Zafar, MD, MPH; Terrence Fullum, MD

A-262-P LAPAROSCOPIC REVERSAL OF GASTRIC BYPASS SECONDARY TO MALNUTRITION AND CHRONIC DIARRHEA

Raul J Rosenthal, MD; Fernando Safdie, MD; Yaniv Cozacov, MD; Pablo Marin, MD; Emanuele Lo Menzo, MD PhD; Samuel Szomstein, MD

A-263-P REVISION LAPAROSCOPIC ADJUSTABLE GASTRIC BAND (LAGB) TO LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG) SHOULD BE PERFORMED AS A TWO STEP PROCEDURE.

Gary Yee, MBBS FRACS; Divya Vaswani, MBBS; Bianca G Lan, MBBS, BAppSc(Phy); James Chau; William J Hawkins; John O Jorgensen, MB BS MS FRACS; Vytautas Kuzinkovas; Ken Loi, MD; Michael Talbot, FRACS

A-264-P CONVERSION FROM LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING TO LAPAROSCOPIC GASTRIC BYPASS IN TWO STEPS.

Sergio Carandina; Emmanuel Rivkine; Antonio Valenti; Christophe Barrat; Claude Polliand, MD

A-265-P REVISIONAL BARIATRIC SURGERY OUTCOMES

Houssein Haidar Ahmad, MD; Debbie Wong, MD; Nestor F de la Cruz-Munoz, MD; Sarah E Messiah; Kristopher L Arheart, EdD

A-266-P REVISION OF LAGB TO VS.G IN ONE STAGE: A SAFE OPTION

Brian F Lane, MD;

A-267-P LAPAROSCOPIC REVERSAL OF ROUX-EN-Y GASTRIC BYPASS TO SLEEVE GASTRECTOMY WITH MAINTAINING THE ENTERIC BYPASS: AN ALTERNATIVE APPROACH TO CORRECT SEVERE DEFICIENCIES

Abdelkader Hawasli, MD; Ahmed A Meguid, MD; Alwyn Harriott; Bradley Hare; Taghreed Almahmeed; Naga Thatimatla; Susan M Szpunar, PhD

A-268-P ALWAYS 1 STAGE REVISION OF ROUX-EN-Y GASTRIC BYPASS TO BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH.

Phillippe A Topart, MD; Guillaume Becouarn, MD; Agnes Sailla, MD

A-269-P ROBOTIC ESOPHAGO-GASTRECTOMY DUE TO CHRONIC GASTRO-PLEURAL FISTULA SECONDARY TO SLEEVE GASTRECTOMY LEAK: BENEFITS OF THE ROBOTIC PLATFORM.

Rey J Romero, MD; Radomir Kosanovic, MD; Anthony M Gonzalez, MD, FASC, FAMBS

A-270-P CHRONIC DEBILITATING GASTROINTESTINAL SYMPTOMS: OUTCOMES OF GASTRIC BYPASS REVERSAL

Melissa B Baglao, MD; Beth A Schrope, MD; Akuezunkpa O Ude Welcome, MD; Mary F DiGiorgi, PhD; Laura DeCesare; Suxiao Yang; Avi Harari; Marc Bessler, MD

A-271-P THE OUTCOMES OF REVISIONAL ROUX-EN-Y GASTRIC BYPASS FOR FAILED GASTRIC RESTRICTIVE PROCEDURE

Hagar Mizrahi, MD, MSc; Shady Selbak, MD; Adeeb Nicola; Milad Qarawany, MD; Nissim Geron, MD

A-272-P CONVERSION AND REVISION OF PRIMARY BARIATRIC PROCEDURES OVER 12 YEARS IN A COMMUNITY PRACTICE

Robin L Blackstone, MD; Melisa P Celaya, MA, CCRC; Melissa M Davis, MSN APRN BC CNS RNFA; Jason F Reynoso, MD; James M Swain, MD

A-273-P LAPAROSCOPIC REVISIONAL GASTRO-JEJUNOSTOMY FOR FAILED ROUX-EN-Y GASTRIC BYPASS: SHORT-TERM OUTCOMES

Abdulrahman Hamdi, MD; Batul H Al-zubeidy, MD; Ian M Woods, Phillip Brown, BS; Christopher Julien, BS, MS2; Gezzer Ortega, MD, MPH; Daniel Tran, MD; Terrence Fullum, MD

A-274-P REVISIONAL SURGERY FROM FAILED ADJUSTABLE GASTRIC BAND TO LAPAROSCOPIC SLEEVE GASTRECTOMY IN ONE SURGICAL TIME

Marcos A Berry, MD; Lionel Urrutia, MD; Patricio Lamoza; Alvaro Bustos; Marco Schulz, MD

A-275-P CLINICAL OUTCOMES OF BARIATRIC REVISIONAL PROCEDURES: COMPARISON WITH PRIMARY SURGERY

Juan Eduardo Contreras, MD; Carmen Santander; Francisco Perez; Ismael Court, MD; Jorge Bravo; Katerine Cuellar; James Hamilton; Percy Brante, MD

A-276-P ROUX-EN-Y GASTRIC BYPASS VERSUS LAPAROSCOPIC SLEEVE GASTRECTOMY AS A REVISION FOR FAILED OR COMPLICATED LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING

Caleb Melancon, BS; Ronak S Patel, BS; Robert C Dubin, MD; Gabriel I Uwaifo, MD; Rachel L Moore, MD; Frank L. Greenway, MD; William Johnson, PhD; William T Cefalu, MD

A-277-P LAPAROSCOPIC REVISIONAL BARIATRIC SURGERY: OUR EXPERIENCE AFTER 7225 BARIATRIC SURGERY CASES.

Oscar E Brasesco; Gaston Borlle; Guillermo Muzzio; Mario Corengia; Alberto Rivera; Carlos Balteiro; Noelia Zurbriggen; Gabriel Menaldi; Jorge A Bella; Pedro Martinez

A-278-P SURGICAL MANAGEMENT OF GASTROGASTRIC FISTULA POST ROUX EN Y GASTRIC BYPASS

Mohammad Jamal; Hideharu Shimizu; Stacy A Brethauer, MD; Tomasz Rogula, MD PhD; Bipan Chand, MD; Matthew D Kroh, MD; Philip R Schauer, MD

POSTERS

SCIENTIFIC RESEARCH

A-279-P USEFULNESS OF PULMONARY FUNCTION TEST AS A PREOPERATIVE SCREENING IN PATIENTS UNDERGOING BARIATRIC SURGERY.

Diana Clavellina-Gaytan, MD; Juliana Baglietto-Azaredo, MD; Eduardo Del-Villar, MD; Sonia C. S. Juarez-Comboni, MD; Hugo Sanchez, MD; Miguel F Herrera, MD PhD

A-280-P ACUTE POST-BARIATRIC SURGERY INCREASE IN OREXIN LEVELS PREDICTS PREFERENTIAL LIPID PROFILE IMPROVEMENT

Abhishek Gupta, PhD; Pierre Miegueu, PhD; Marc Lapointe, MSc; Paul Poirier, MD, PhD; Julie Martin, PhD; Marjorie Bastien; Katherine Cianflone, PhD

A-281-P IMPACT OF BARIATRIC SURGERY ON THYROID HORMONES IN OBESE EUTHYROID PATIENTS

Tirissa Reid; Saqib Saeed, MD; Amrita Persaud, RD, CDN; Adebola A Osewa, FNP-BC; Shiranda McCoy, PA; Monqidh Al-Sawwaf, MD; Leaque Ahmed, MD

A-282-P PROFILES OF ADIPONECTIN EXPRESSION FOLLOWING MIQE GUIDELINES IN LIVER, OMENTAL FAT, AND PERIPHERAL CIRCULATION IN OBESE PATIENTS UNDERGOING GASTRIC BYPASS

Paul Sarkaria; Magnolia Ariza-Nieto, PhD; Sanjay A. Samy, MD; Laura Fitzgerald, MPH; Michael L Shuler, PhD; Joshua B Alley, MD

A-283-P IDENTIFICATION OF CRITICAL SAFETY ZONES DURING LAPAROSCOPIC GASTRIC BYPASS SURGERY USING ERROR ANALYSIS

Esther M Bonrath, MD; Boris Zevin, MD; Nicolas J Dedy, MD; Teodor P Grantcharov, MD PhD

A-284-P GLP-1, SIRT1 AND FOXO1 MEDIATE IMPROVEMENT OF INSULIN SENSITIVITY AND BETA-CELL FUNCTION AFTER ROUX-EN-Y GASTRIC BYPASS

James Lee; Michel M Murr, MD; Mark M Hartney, MD; Xiaohua Peng; Yanhua Peng

A-285-P FACTORS ASSOCIATED WITH LONG TERM WEIGHT REGAIN AFTER BARIATRIC SURGERY

Mary F DiGiorgi, PhD; Melissa B Bagloo, MD; Beth A Schroppe, MD; Nancy L Restuccia, MS RD CDN; Eileen Harvey; Marc Bessler, MD

A-286-P PREOPERATIVE LOW CALORIE DIET PRIOR TO LAPAROSCOPIC GASTRIC BYPASS - TWO WEEKS OF TREATMENT IS SUFFICIENT IN REDUCING LIVER VOLUME

David Edholm; Joel Kullberg; F. Anders Karlsson; Hakan Ahlstrom; Arvo Hanni; Magnus Sundbom, PhD

A-287-P WOMENS REASONS FOR SEEKING BARIATRIC SURGERY AND THEIR EXPECTATIONS. A MULTICENTER STUDY FROM FIVE EUROPEAN COUNTRIES.

Mari MH Hult, MD, PhD; Anne Juuti, MD, PhD; Signe Caroline Rastad, MD; Lars Fischer; Wouter WW te Riele, MD, PhD; Kai Orava, MD; Harri Mustonen; Timo J Heikinen, MD, PhD; Rune Sandbu, MD

A-288-P THE EFFECT OF PREOPERATIVE ANTIBIOTIC USE ON THE MICROBIOME: A RETROSPECTIVE ANALYSIS UTILIZING THE JOHNS HOPKINS CENTER FOR BARIATRIC SURGERY DATABASE 2009-2011

Estefania De La Paz Nicolau, MD, MPH; Ransom J Wyse, MPH, CPH; Marie Diener-West, PhD; Ann Scheimann, MD, MBA; Timothy H Moran, PhD; Michael Schweitzer, MD, FACS; Thomas H Magnuson, MD; Kimberley E Steele, MD

A-289-P CASE REPORT: HYPOADIPONECTINEMIA AS A PREDICTOR OF FAILURE TO RESOLVE METABOLIC SYNDROME BY 12 WEEKS POST GASTRIC BYPASS

Joshua B Alley, MD; Sanjay A. Samy, MD; Laura Fitzgerald, MPH; Magnolia Ariza-Nieto, PhD

A-290-P FEASIBILITY AND EFFICACY OF SMARTPHONE BASED EDUCATION MODULES AND ECOLOGICAL MOMENTARY ASSESSMENT FOR BARIATRIC SURGERY

Manpreet S Mundi, MD; Paul Lorentz, MS RN RD; Karen B Grothe, PhD ABPP LP; Todd A Kellogg, MD; Maria L Collazo-Clavell, MD

A-291-P COLLOID KINETICS IN MORBIDLY OBESE PATIENTS UNDERGOING GENERAL ANESTHESIA

Maria Victoria V Hernandez, MD; Miguel F Herrera, MD PhD; Guillermo Dominguez, MD; Bernardo Gutierrez, MD

A-292-P PREDICTORS OF SUICIDAL RISK IN BARIATRIC SURGERY CANDIDATES

Jenna L Adamowicz, MA; Jessica K Salwen, MD; Genna F Hymowitz, PhD; Dina Vivian, PhD

A-293-P BARIATRIC SURGERY INFLUENCES ENDOTHELIAL AUTOANTIBODY CONCENTRATION IN TYPE 2 DIABETICS

William O Richards, MD; Donna L Cioffi, PhD

A-294-P LONG TERM MORTALITY AND BARIATRIC SURGERY: A SYSTEMATIC REVIEW OF THE LITERATURE AND META-ANALYSIS

Maria Tiboni; Dennis Hong, MD; Roman Jaeschke, MD, MSc, FRCP; P J Devereaux, MD, PhD, FRCPC

A-295-P QUALITY OF LIFE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY WITH JEJUNAL BYPASS BASED ON BARIATRIC ANALYSIS AND REPORTING OUTCOMES SYSTEM (BAROS)

Matias Sepulveda; Munir J Alamo, MD; Nicolas Flores, MD; Ximena Prat; Cristian A Astorga, MD; Hernan Guzman, MD

A-296-P DOES URINARY BPA CHANGE AFTER BARIATRIC SURGERY?

John M Morton, MD; Natalia Leva; Trit Garg; Nayna Lodhia

A-297-P THE IMPACT OF MEDICAL AND SURGICAL WEIGHT LOSS UPON THE HUMAN GUT MICROBIOME

John M Morton, MD; Leanne Almario; Natalia Leva; Todd DeSantis; Janet Warrington

A-298-P DO SALIVARY CORTISOL LEVELS CHANGE AFTER BARIATRIC SURGERY?

John M Morton, MD; Carl Dambrowski; Natalia Leva; Chris Crowe

SLEEVE GASTRECTOMY

A-299-P DOES BOUGIE SIZE INFLUENCE THE INCIDENCE OF STRICTURE AFTER SLEEVE GASTRECTOMY?

Lawrence E Tabone, MD; Alfonso Torquati, MD; Dana D Portenier, MD; Ranjan Sudan, MD; Jin Yoo, MD; Philip A Omosho, MD;

A-300-P ASSOCIATION BETWEEN WEIGHT LOSS AND THE INCIDENCE OF GALLSTONE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: A PROSPECTIVE STUDY

Wuttiporn Manatsathit; Hussein Al-Hamid; Aiman Mahmood, MD; Baljinder Gill, MD; Pornchai P Leelasinjaroen, MD; Susan M Szpunar, PhD; Abdelkader Hawasli, MD

A-301-P PROSPECTIVE RANDOMIZED CLINICAL ANALYSIS BETWEEN THREE REINFORCEMENT TECHNIQUES ON STAPLE LINE IN SLEEVE GASTROPLASTY CASE STUDY WITH 345 PATIENTS.

Fabio Viegas, MD; Pedro Worms, MD; Luciana Vilela, MD; Paulo Silveira, MD; Jose Pinna Cabral, MD

A-302-P LAPAROSCOPIC CONVERSION OF ROUX-EN-Y GASTRIC BYPASS TO SLEEVE GASTRECTOMY: CASE SERIES

H. Ruby Gatschet; Yacoub Zayadeen; Cyrus Moon; Saber Ghiassi, MD, FACS, MPH; Keith B Boone, MD; Kelvin Higa

A-303-P LAPAROSCOPIC SLEEVE GASTRECTOMY: DOES THE SIZE OF THE STOMACH MATTER? PRELIMINARY RESULTS OF A PROSPECTIVE STUDY.

Juan P Toro, MD; Nathaniel W Lytle, MD; Ankit Patel, MD; Sebastian Perez, MSPH; Jahnavi Srinivasan, MD; John F Sweeney, MD; Edward Lin, DO; S. Scott Davis Jr., MD

A-304-P REASONS FOR AND OUTCOMES OF CONVERSION FOR FAILED LAPAROSCOPIC SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS

Samuel Szomstein, MD; Emanuele Lo Menzo, MD, PhD; Raul J Rosenthal, MD; Abraham Abdemur, MD; Rena Moon, MD; Carolina Ampudia, MD

A-305-P TOTAL CHARGES FOR POSTOPERATIVE LEAK FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY

April Zambelli-Weiner; Elizabeth Brooks, PhD; Robert E Brolin, MD; Eric Bour, MD

A-306-P SLEEVE GASTRECTOMY: IS IT A GOOD OPTION FOR PATIENTS WITH GASTRO-ESOPHAGEAL REFLUX DISEASE (GERD)

Abdelkader Hawasli, MD; Bradley Hare; Amer Zeni; Ahmed A Meguid, MD; Alwyn Harriott, MD; Taghreed Almahmeed; Naga Thatimatla; Susan M Szpunar, PhD

A-307-P DETECTION OF POST SLEEVE GASTRECTOMY LEAK WITH NEAR INFRARED IMAGING.

Hrishikesh S Nerkar; Danny A Sherwinter, MD

A-308-P PREDICTING GASTROESOPHAGEAL REFLUX SYMPTOMS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

Katelyn Mellion, MS; Peter F Lalor, MD

POSTERS

- A-309-P DO GALLSTONES FOUND BEFORE SLEEVE GASTRECTOMY BEHAVE THE SAME AS THOSE FORMED BECAUSE OF WEIGHT LOSS POST-OPERATIVELY?**
Abdelkader Hawasli, MD; Manatsathi Wuttibhorn; Bradley Hare; Moayad Tarboush; Ahmed A Meguid, MD; Alwyn Harriott, MD; Naga Thatimatla; Taghreed Almahmeed; Alexandria Conley, MD; Sarah Hans, MD
- A-310-P LAPAROSCOPIC VERTICAL SLEEVE GASTRECTOMY CAN BE PERFORMED SAFELY AS AN OUTPATIENT PROCEDURE**
Thomas W Clark, MD, MS;
- A-311-P LAPAROENDOSCOPIC MANAGEMENT OF SLEEVE GASTRECTOMY STAPLE LINE LEAKS**
Ryan M Juza, MD; Tung Tran; Jerome R Lyn-Sue, MD; Vinay Singhal, MD; Randy S Haluck, MD; Eric M Pauli, MD; Ann M Rogers, MD
- A-312-P MEANS TO DEAL WITH TREATMENT RESISTANT STENOSIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY**
Jacques M Himpens, MD, PhD; Ramon Vilallonga, MD PhD
- A-313-P LAPAROSCOPIC SLEEVE GASTRECTOMY: A SAFE TECHNIQUE FOR THE COMMUNITY BASED SURGEON**
George E Woodman, MD; Guy Voeller, MD
- A-314-P ROUTINE POSTOPERATIVE SWALLOW STUDY RARELY ALTERS MANAGEMENT AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY**
Richard C Novack, MD; Matthew T LeMaitre, MD; Sebastian R Eid, MD; Amit Trivedi; Hans J Schmidt, MD; Douglas R Ewing, MD
- A-315-P BARIATRIC SURGERY OUTCOMES IN A EUROPEAN CENTER OF EXCELLENCE (COE)**
Ramon Vilallonga, MD PhD; Jose Manuel Fort; Oscar Gonzalez; Enric Caubet; Albert Lecube; Jordi Mesa, PhD; Manel Armengol
- A-316-P RADIOGRAPHIC AND PATHOLOGIC SPECIMEN MESAUREMENTS FAIL TO PREDICT POSTOPERATIVE WEIGHT LOSS IN PATIENTS UNDERGOING SLEEVE GASTRECTOMY.**
Raul J Rosenthal, MD; Savannah I Moon, DO; Yaniv Cozakov, MD; Samuel Szomstein, MD; Emanuele Lo Menzo, MD, PhD; Fernando FD Dip, MD
- A-317-P THE EFFICACY OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN ADOLESCENTS**
Salman K Al-Sabah, MD; Shaimaa Sh Dashti
- A-318-P SLEEVE GASTRECTOMY AS SOLE PROCEDURE FOR MORBID OBESITY**
Hans J Nielsen, MD; Maria A Decap, MD; Tor Nedreba, MD; Christer Kvelvane, MD; Kim Waardal, MD; Anne K Bergesen, MD; Hanne Gjessing; Olav Lademel, MD; Tone N Flalo, MD; Villy Vayge, MD, PhD
- A-319-P IMPLEMENTATION OF A TREATMENT ALGORITHM FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY TO DECREASE POSTOPERATIVE NAUSEA/VOMITING AND LENGTH OF STAY.**
Charmaine V Gentles, ANP-BC RNFA; Timothee J Friesen, MD; Larry E Gellman, MD; Dominick Gadaleta, MD
- A-320-P LAPAROSCOPIC VERTICAL SLEEVE GASTRECTOMY (LSG) AS STAND-ALONE BARIATRIC PROCEDURE IN SUPER MORBIDLY OBESE (SMO) INDIAN PATIENTS - IS IT ENOUGH?**
Sandeep Malhotra, MBBS; Mriganka S Sharma, MBBS, MS; Dharmender Sharma, MBBS, MS; Vinay K Shaw, MBBS, MS; Tanveer Singh, MBBS, MS, DNB; Adarsh Chaudhary, MBBS, MS, FRCS
- A-321-P A SPECIMEN RETRIEVAL BAG IS NOT REQUIRED IN SLEEVE GASTRECTOMY**
Amanda Parker, MD; James T. Mayes, MD; JR Salameh, MD
- A-322-P GASTRIC HISTOPATHOLOGY IN SLEEVE GASTRECTOMY**
Amanda Parker, MD; James T. Mayes, MD; JR Salameh, MD
- A-323-P RISK OF STABLE LINE LEAK POST LSG, CAN H.PYLORI PLAY A RULE?**
Nour Na Almalki, MD; Fahad Y Bamehriz; Amani Al-Ajmi, MD, KKHU
- A-324-P SLEEVE GASTRECTOMY WITH ONE LAYER OF BUTTRESSING MATERIAL**
Cristobal Guixé, MD; Hector Conaman, MD
- A-325-P PORTAL-MESENTERIC THROMBOSIS FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY: A RARE BUT POTENTIALLY SERIOUS COMPLICATION**
Marcos A Berry, MD; Lionel Urrutia, MD; Patricio Lamoza; Alvaro Bustos; Marco Schulz, MD
- A-326-P SUPER OBESE VS. MORBIDLY OBESE PATIENTS : CLINICAL OUTCOMES AND ESTIMATED WEIGHT LOSS**
George C Ezeji, MD; Maher El Chaar, MD; Leonardo Claros, MD, FACS, FASMBS; Jill Stoltzfus, PhD; Maureen E Miletics, RN BSN MS CBN
- A-327-P SAFETY OF BARIATRIC SURGERY IN THE ELDERLY PATIENT**
George C Ezeji, MD; Maher El Chaar, MD; Leonardo Claros, MD; FACS, FASMBS; Jill Stoltzfus, PhD; Maureen E Miletics, RN BSN MS CBN
- A-328-P SAFE SLEEVE GASTRECTOMY OUR MODIFIED TECHNIQUE**
Ramen G Goel, MS; Arul Vanan
- A-329-P SLEEVE GASTRECTOMY: 7 YEAR WEIGHT LOSS OUTCOMES**
Jonathan A Schoen, MD; Kevin B Rothchild, MD; John James, MD; David Leopold, BA; Breana C Mitchell, MS
- A-330-P PATTERN OF WEIGHT LOSS IN DIFFERENT CATEGORIES OF OBESITY FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY: A SINGLE CENTER EXPERIENCE.**
Noran Barry, MD; Maher El Chaar, MD; Leonardo Claros, MD, FACS, FASMBS; Jill Stoltzfus, PhD; Maureen Miletics, RN, BSN, MS, CBN; George Ezeji, MD
- A-331-P SINGLE-INCISION SLEEVE GASTRECTOMY VERSUS LAPAROSCOPIC SLEEVE GASTRECTOMY: A CASE-CONTROL STUDY**
Elie Chouillard;
- A-332-P RESULTS OF LAPAROSCOPIC SLEEVE GASTRECTOMY AFTER FAILED GASTRIC BANDING.**
Pierre Fournier, MD; Lara Ribeiro-Parenti, MD; Kostantinos Arapis; Denis Chosidow; Jean-Pierre Marmuse
- A-333-P MECHANICAL THEORY OF FISTULA IN A SLEEVE GASTRECTOMY: AN EXPERIMENTAL STUDY OF THE RESISTANCE OF THE LINEAR GASTRIC STAPLING**
Pierre Fournier, MD; Gregoire De Courville; Peter PU Upex; Lara Ribeiro-Parenti, MD; Denis Chosidow; Jean-Pierre Marmuse
- A-334-P IS STAPLE LINE REINFORCEMENT REALLY NECESSARY FOR LAPAROSCOPIC SLEEVE GASTRECTOMY?**
Matthew Mancini, MD; Adam W Evans, MS; Gregory J Mancini, MD

SURGICAL COMPLICATIONS

- A-335-P OUTCOMES OF TRANSFERRING BARIATRIC PATIENTS**
Hanna Davis, DO; Justin Lee, MD; Nicole Pecquex, MD; Julia S Tassinari, MD
- A-336-P MANAGEMENT OF MARGINAL ULCERS AFTER ROUX-EN-Y GASTRIC BYPASS**
Rena Moon, MD; Andre Teixeira, MD; Muhammad A Jawad, MD
- A-337-P IS THERE A BEST OPTION TO TREAT STAPLE LINE LEAK POST LAPAROSCOPIC SLEEVE GASTRECTOMY ?**
Mohammed Qattan; Fahad Bamehriz Bamehriz, MD
- A-338-P ACCURACY OF ROUTINE POSTOPERATIVE SWALLOW STUDY IN PREDICTING LEAK OR OBSTRUCTION AFTER BARIATRIC SURGERY**
Michael L Rawlins, MD; Rachel Penn; Bruce Schirmer, MD; Peter T Hollowell, MD
- A-339-P DEEP VEIN TROMBOSIS IN THE MORBIDLY OBESE PATEINT UNDERGOING LAPAROSCOPIC BARIATRIC PROCEDURES. DOES ROUTINE POSTOPERATIVE ULTRASOUND IMPROVE OUTCOMES?**
Raul J Rosenthal, MD; Fernando Safdie, MD; Jessica Ardila-Gotas, MD; Abraham Betancourt, MD; Emanuele Lo Menzo, MD, PhD; Samuel Szomstein, MD; Savannah I Moon, DO
- A-340-P NESTED ENDOLUMENAL STENTS FOR THE TREATMENT OF ESOPHAGOGASTRIC LEAKS**
Aileen Murphy, DO; Christy M Dunst; Lee Swanstrom, MD; Valerie J Halpin, MD; Jay C Jan, MD; Kevin M Reavis, MD
- A-341-P RISK FACTORS FOR INCREASED INTRAOPERATIVE BLOOD LOSS DURING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS**
Lawrence E Tabone, MD; Dana D Portenier, MD; Ranjan Sudan, MD; Jin Yoo, MD; Philip A Omotosho, MD; Alfonso Torquati, MD
- A-342-P REDUCTION OF 30-DAY READMISSION RATES THROUGH THE USE OF A DISCHARGE PROTOCOL**
Sharon A Krzyzanowski, RN; Keith C Kim, MD, FACS; Cynthia K Buffington, PhD

POSTERS

A-343-P REOPERATIVE MINIMALLY INVASIVE SURGERY FOR THE MANAGEMENT OF EARLY COMPLICATIONS AFTER GASTRIC BYPASS

Ali Aminian, MD; Hector Romero-Talamas, MD; Esam S Batayyah, MD; Nancy Anzlovar, RN; Mary Ellen Satava, RN; Matthew D Kroh, MD; Bipan Chand, MD, FACS, FASMB, FASGE; Tomasz Ro Rogula, MD, PhD; Stacy A Brethauer, MD; Philip R Schauer, MD

A-344-P RATES OF REFLUX BEFORE AND AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY OF WEIGHT WISE CLINIC PATIENTS

Caroline Sheppard; Daniel W Birch, MSc MD; Daniel C Sadowski, MD, FRCPC; Christopher J de Gara, MB MS; Shahzeer Karmali, MD, FRCSC, FACP

A-345-P CONSERVATIVE MANAGEMENT OF LEAKS AND STENOSIS AFTER SLEEVE GASTRECTOMY.

Sergio Carandina; Emmanuel Rivkine; Christophe CB Barrat, MD; Antonio Valenti; Claude Polliand, MD

A-346-P ACCURACY OF ROUTINE PREOPERATIVE ARTERIAL BLOOD GAS IN PREDICTING POSTOPERATIVE PULMONARY COMPLICATIONS AFTER BARIATRIC SURGERY

Michael L Rawlins, MD; Rachel Penn; Bruce Schirmer, MD; Peter T Hollowell, MD

A-347-P VENOUS THROMBOEMBOLISM OF THE UPPER EXTREMITIES IN THE MORBIDLY OBESE PATIENT UNDERGOING LAPAROSCOPIC BARIATRIC PROCEDURES

Raul J Rosenthal, MDI, Jessica Ardila-Gatas, MDI, Fernando Safdie, MDI, Emanuele Lo Menzo, MD, PhDI, Samuel Szomstein, MDI;

A-348-P PROXIMAL GASTRECTOMY WITH ROUX Y RECONSTRUCTION AS A TREATMENT MODALITY FOR PATIENTS WITH CHRONIC STAPLE LINE DISRUPTION AFTER A SLEEVE GASTRECTOMY

Raul J Rosenthal, MD; Catherine Ho, DO; Yaniv Cozacov, MD; Jessica Ardila-Gatas, MD; Emanuele Lo Menzo, MD PhD; Samuel Szomstein, MD

A-349-P LAPAROSCOPIC TREATMENT FOR COMPLICATED MARGINAL ULCER FOLLOWING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

Po-Chih Chang; Po-Chih Chang; Chih-kun Huang, MD; Kirubakaran Malapan

A-350-P THE IMPACT OF ROUTINE OVERSEWING VS.. NOT OVERSEWING OF THE GASTROJEJUNOSTOMY SITE FOLLOWING A LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

Patrick G Northcraft, FNP-C; Tina L Shelton, MSN RN CBN; Sandra B Snider, CST, BSCR; Troy M Glembot, MD MBA CPE FACS FASMB

A-351-P REDUCING THE INCIDENCE OF SSI IN THE BARIATRIC PATIENT

Lorraine A Foran, RN; Rosemary LC Holtzman, CLS, MBA, CIC

A-352-P SMALL BOWEL INTUSSUSCEPTION AFTER ROUX-EN-Y GASTRIC BYPASS

Derek Stephenson; Rena Moon, MD; Andre Teixeira, MD; Muhammad A Jawad, MD

A-353-P SURGICAL MANAGEMENT OF PROTEIN MALNUTRITION IN POST BPD PATIENTS.

Mohammed K Gari, MD;

A-354-P USE OF A SYNTHETIC BIOABSORBABLE TISSUE SCAFFOLD IN THE CLOSURE OF THE RETRO-ROUX LIMB INTERNAL HERNIA SPACE: A NOVEL TECHNIQUE

John D Scott, MD; Ihab Shenouda, MD; Brent L Johnson, MS; Eric Bour, MD

A-355-P ENDOLUMINAL SURGERY WITH OVERSTITCH DEVICE FOR TREATMENT OF GASTRO-GASTRIC FISTULAS FOLLOWING ROUX-EN-Y GASTRIC BYPASS

Catherine Beck, MD; Sabrena F Noria, MD PhD; Dean J Mikami, MD

A-356-P MANAGEMENT OF COMPLICATIONS AFTER LAPAROSCOPIC GASTRIC GREATER CURVATURE PPLICATION

Mohamed MS Sharaan, MD; Tamer N Abdelbaki, MD, MRCS

A-357-P ENDOPROSTHESIS VS. EARLY GASTRIC BYPASS: OUR EXPERIENCE IN MANAGEMENT OF FOUR CASES OF SLEEVE GASTRECTOMY LEAKS.

Manish Khaitan, MS, FAIS; Gunjan Khaitan

A-358-P CAN REVISION GASTROJEJUNOSTOMY BE SAFELY PERFORMED IN PATIENTS WITH MARGINAL ULCERS?

Brenda M Cacucci, MD; Leslie M Schuh, PhD; Margaret M Inman, MD; David Diaz, MD; Christopher M Evanson, MD; John M Huse, MD; Douglas J Kaderabek, MD

A-359-P EARLY ORAL FEEDING WITHOUT STENTING DURING THE CONSERVATIVE MANAGEMENT OF LEAKAGE AFTER SLEEVE GASTRECTOMY: 2 CASE REPORTS

Khaled Katri, MD, FRCSC;

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Lee M Morris, MD; Joshua C Coursey, MD; Melanie L Hafford, MD; Patrick R Reardon, MD; Vadim Sherman, MD

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Juan Eduardo Contreras, MD; Carmen Santander; Francisco Perez; Fernando Schiaffino; Ismael Court, MD; Jorge Bravo; James Hamilton; Percy Brante, MD; Katerine Cuellar; German Lobos

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Munir J Alamo, MD; Matias Sepulveda

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Amy Rosenbaum, MD; Ashley N Bohon, MA; Debbie Pasini, RN; Noelle M Bothe, MSN, FNP-BC, CBN; Pozsgay Mark, DO; John G Zografakis, MD; Adrian G Dan, MD FACS

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Colleen M Cook; Debra Safer; Sarah Adler, PysD; Athena H Robinson, PhD; Alison M Darcy, PhD

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Susan Gallagher, PhD RN; Dominick Gadaleta, MD; Sophia Skinner, MD

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AnnaMarie Braslow, RN BS EMBA CCRN CBN; Lisa Messineo, RD CDN; Daphne Baldwin Kornrich, MS RD CDN; Alicia Korpis; Nicole Zaybak Drepaniotis, MS RD CDN; Linda S Folken, MS, RD, CDN; Arif Ahmad, MD FACS FRCs; Ashish Agarwala, DO

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Maihoa Nguyen, MPH, PA; Frank Dong; Justin Moore, MD; Bobbie G Paull-Forney, MPH, RN; Elizabeth Ablah, MPH, PhD

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Silvia L Faria, MS; Orlando P Faria, MD; Mariane M Cardeal, MD

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Krista K Castleberry, LCSW; Keith C Kim, MD, FACS; Cynthia K Buffington, PhD

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Elaine C Souza, MPH RD; Judy L Yamasaki, RN BSN CBN; Colleen S Baucom-Pro, MAS RD; Mohamed R Ali, MD

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Sally N Strange, RN PhDc;

POSTERS

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Andi Herlong; Keith C Kim, MD, FACS; Cynthia K Buffington, PhD

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Axel A Beskow, MD; Agustin Duro, MD; Nora E Vainstein, MD; Demetrio Cavadas, MD PhD; Susana R Gutt, MD

A-377-P WHAT GOOGLE TRENDS CAN TEACH US ABOUT INTEREST IN BARIATRIC SURGERY AROUND THE WORLD

Faina Linkov; Dana Bovbjerg; Kyle Freese, MPH; Giselle G Hamad, MD; Robert Edwards; Ramesh C Ramanathan, MD; Carol A McCloskey, MD; George M Eid; William F Gourash, MSN, CRNP

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Adrian Toh; Kavita Sundaram; Jaideep Raj Rao; Aaryan Koura; Jaideep Raj Rao

A-379-P RELATIONSHIP OF ANXIOUS AND DEPRESSIVE STATES WITH BINGE EATING DISORDER IN OBESE PATIENTS

Maureen M Mosti, RN; Araceli Gomez-Alva, PhD; Patricia Martinez Lanz, PhD; Javier Morales, BA; Diego Russo, BA; Gabriela Salcedo; David D Velazquez-Fernandez, MD MSc PhD; Miguel F Herrera, MD PhD

A-380-P PREDICTIVE PSYCHOLOGICAL SUCCESSFUL FACTORS IN BARIATRIC SURGERY

Marie Pigeyre, MD, PhD; Anne Pleuvret; Auralee Lochon; Pauline Camard; Alexandre Patrice; Helene Verkindt; Robert Caiazzo, MD; Monique Romon, MD, PhD; Francois Pattou, MD, PhD

A-381-P PREDICTIVE WEIGHT LOSS MODELING USING 3D SCANNING TECHNOLOGY: SETTING REALISTIC EXPECTATIONS FOR BARIATRIC SURGICAL PATIENTS

Stephen D Wohlgenuth, MD

A-382-P CAN PREOPERATIVE PATIENT RISK FACTORS PREDICT A COST EFFECTIVE METHOD TO EVALUATE THE PRESENCE OF SLEEP APNEA IN PATIENTS SEEKING BARIATRIC SURGERY?

Ranjan Sudan, MD; Xavier Preudhomme, MD; Alfonso Torquati, MD; Dana D Portenier, MD; Andrew Krystal, MD

A-383-P METABOLIC GASTRIC STAPLING SURGERY PERFORMED AS AN OUTPATIENT PROCEDURE

Fredne Speights, Michael Williams

POSTER PRESENTATIONS

All posters will be displayed in the Exhibit Hall (Halls A1-A2) of the Georgia World Congress Center.

Poster Display Dates: Wednesday, 11/13, through Friday, 11/15.

EXHIBIT HALL HOURS:

- ▶ **Wednesday, November 13th**
9:00am - 4:00pm
- ▶ **Thursday, November 14th**
10:00am - 3:30pm
- ▶ **Friday, November 15th**
10:00am - 3:30pm

There are no required times for official poster presentations; however, poster presenters are encouraged to be standing by your poster during the breaks and lunches to be able to discuss your poster with attendees.

POSTERS OF DISTINCTION

Top-scored posters will be given three minutes to present their posters during lunch on Wednesday, 11/13, and Thursday, 11/14. This will be held in the Posters of Distinction Theater on the left-hand side of the exhibit hall between the exhibits and the lunch tables. For a full schedule and listing of the posters being presented, please see page 41 of the ASMBS final program.

Wednesday, November 13, 2013

1:30 pm – 5:10 pm EST

Oral Presentations: Scientific Sessions

Paper Sessions I & II: Top Ten Papers

A-101-OR

Predictors of T2DM remission in Asian patients at 1 year after LRYGB

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E-Da Hospital¹

Background:

Evidences have proved that LRYGB is able to induce T2DM remission. Multiple studies have showed different predictors in the remission of T2DM after this procedure. Our objective is to determine the predictors of diabetes remission in T2DM patients that has undergone LRYGB in Asian. **Methods:** Data was collected on T2DM patients who underwent LRYGB from December 2005 to April 2012. Patients with T2DM who underwent LRYGB were included irrespective of the BMI and age. Data collected were gender, age, body height (BH) and body weight (BW), BMI, waist-hip ratio (WHR), FPG, HbA1c, c-peptide, duration of T2DM, oral hypoglycemic agent (OGHA) and/or insulin used and associated co morbidities. Patients were divided into three groups: total patients (group A), patients with BMI >35 (group B) and those with BMI < 35 (group C). Remission is defined as "FPG <100 mg/dL and HbA1c <6% without the use of OGHA or insulin therapy". Glycemic control HbA1c of 7% despite no use of anti-diabetic medications. Data were collected prospectively and analyzed retrospectively. Results were analyzed to determine the remission of T2DM and its predictors. **Results:** Total patients included were 384 patients with BMI >35 were 260 and those with BMI < 35 were 124. In group A, mean age was 41.26yo, baseline mean BMI was 38.91kg/m², FPG 165.63mg/dl, HbA1c 8.54%, c-peptide 3.58mg/dl. In group B, mean age was 38.97yo, baseline mean BMI 43.98kg/m² FPG 155.64mg/dl, HbA1c 8.27%, c-peptide 4.13mg/dl. In group c, mean age was 46.06yo, baseline mean BMI was 29.33kg/m² FPG 184.78mg/dl, HbA1c 9.02%, c-peptide 2.75mg/dl. The duration of the diabetes was range from newly diagnosed up to 20 years. Using univariate analysis the significant factors in predicting T2DM remission at 1 year were, age (p=0.000), BH (p=0.008), BW (p=0.000), WHR (p=0.035), BMI (p=0.000), FPG p=(0.030), HbA1C (p=0.000), c-peptide (p=0.000), duration of DM(p=0.000) and OGHA user (p=0.000), insulin user (p=0.030), and combination of OGHA and insulin user (p=0.000) in group A patients; in group B patients, significant factors were FPG (p=0.009) and fatty liver (p=0.022), while in group C patients BW (p=0.000), BMI

(p=0.000), OGHA usage (p=0.043) were significant. Using multivariate regression analysis, the significant predictors in group A were HbA1c (p=0.000) and c-peptide (p=0.031), in group B FPG (p=0.034) was the only significant predictors and C patients BW (p=0.000) was significant predictor. **Conclusions:** This study demonstrates the significant predictors of T2DM remission in total patients were HbA1c and c-peptide. In patients with BMI > 35 was FPG the only predictors, whereas in patient with BMI < 35 body weight is the significant predictor.

A-102-OR

Risk Prediction of Complications of Metabolic Syndrome Before and 6-years After Gastric Bypass

Ali Aminian, MD¹; Hector Romero-Talamas, MD¹; Esam S Batayyah, MD¹; Andrea Zelisko, MD¹; Derrick C Cetin, DO¹; Sangeeta Kashyap, MD¹; John P Kirwan, PhD¹; Stacy A Brethauer, MD¹; Philip R Schauer, MD¹
Cleveland Clinic Foundation¹

Background: Favorable effects of bariatric surgery on glycemic status, lipid panel, and blood pressure have been shown. However, the ultimate results of these changes on end-organ complications are unknown. Several validated risk models for prediction of different diseases including cardiovascular diseases, nephropathy, and retinopathy have been developed in recent years. The objective of this study was to examine changes in predicted risk for cardiovascular diseases, nephropathy, retinopathy, and mortality 6 years after Roux-en-Y gastric bypass (RYGB) among a cohort of diabetic patients.

Methods: Outcomes of 131 diabetic obese patients without cardiovascular diseases who underwent gastric bypass between 01/04-12/07 were assessed. The predicted risk of diabetes-related complications were compared between baseline and the last follow-up point by validated risk assessment tools including: Framingham for 10-year overall risk of coronary heart (CHD), cerebrovascular (CVD), and peripheral vascular diseases (PVD) and 4-year risk of intermittent claudication, UKPDS for 10-year risk of CHD, PROCAM for 10-year risk of myocardial infarction, ARIC for 10-year risk of stroke, DECODE for 5-year risk of cardiovascular mortality, QKidney for 5-year risk of nephropathy, and Semeraro's nomogram for 4-year risk of retinopathy. **Results:** Patients had a male to female ratio of 0.31:1, a mean age of 48.3±9.3 years, a mean BMI of 48.9±8.1 kg/m², and a mean duration of diabetes of 6.4±5.8 years. After a median follow-up time of 6 (range, 5-9) years after surgery, a mean percent excess weight loss of 60.7±25.1% was associated with diabetes remission rate of 61%. At long-term, the levels of HbA1c, LDL, and blood pressure were within the recommended goals in 85%, 73%, and 61% of patients, respectively. In this cohort of diabetic patients, bariatric surgery was associated with a

relative risk reduction by 27% for 10-year overall risk of CHD, CVD, and PVD (from 23.4% to 17.1%, $p<0.001$), by 20% for 10-year risk of CHD (from 8.9% to 7.1%, $p=0.002$), by 40% for 10-year risk of myocardial infarction (from 4.2% to 2.5%, $p<0.001$), by 42% for 10-year risk of stroke (from 5.1% to 2.9%, $p<0.001$), by 47% for 4-year risk of intermittent claudication (From 2.2% to 1.1%, $P<0.001$), by 45% for 5-year risk of moderate-severe kidney disease (from 12.0% to 6.6%, $p<0.001$), of 4-year risk of diabetic retinopathy ($p<0.001$), and by 18% for 5-year risk of cardiovascular mortality (from 1.0% to 0.8%, $p=0.048$) at long-term. **Conclusions:** Results of this study, which utilized different validated risk scores, indicate that bariatric surgery in diabetic patients, along with remarkable control of diabetes, dyslipidemia, and hypertension, is associated with a significant risk reduction for major complications including cardiovascular diseases (CHD, CVD, and PVD), nephropathy, retinopathy, and cardiovascular mortality in the range 18-47% at long-term. The calculated risk estimates can be used to raise population awareness about the health benefits after bariatric surgery.

A-103-OR BARIATRIC SURGERY AND THE MID-TO-LONG TERM OUTCOMES OF DIABETES IN SEVERELY OBESE PATIENTS WITH TYPE 2 DIABETES AT VARYING STAGES

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Greenville Health System¹

Background: Recent studies from our institution and others have shown beneficial effects of bariatric surgery on end-stage macrovascular and microvascular outcomes in patients with type 2 diabetes (T2DM). However, limited data is available examining the effect of surgery on all-cause mortality in this population, and whether the timing of surgery influences the effectiveness of bariatric surgery in preventing these most detrimental consequences of severe obesity and T2DM. The purpose of our study is to estimate the effects of bariatric surgery on all-cause mortality and end-stage diabetes complications and to evaluate the influence of the timing of surgery on these outcomes. **Methods:** We conducted a large, population-based, retrospective cohort study of severely obese patients with T2DM using the South Carolina Office of Research and Statistics (SCORS) statewide Uniform Billing (UB-04) database and South Carolina Department of Health and Environmental Control (DHEC) vital records over a 14 year period (1996-2009). The primary study outcome was all-cause mortality; secondary outcomes included end-stage macrovascular events (MI or stroke) and microvascular events (blindness in either eye, laser eye surgery, lower extremity amputation or creation of arteriovenous access for hemodialysis). Subgroups

were defined by the presence and severity of diabetes-related vascular complications at the time of surgery. **Results:** 24,313 patients were identified as having T2DM and severe obesity at the same admission or visit. 2863 of these patients underwent surgical intervention. Bariatric surgical patients were younger, more commonly Caucasian, female and privately insured and were more likely to carry a diagnosis of hyperlipidemia or sleep apnea than were non-surgical patients; however, non-surgical patients were more likely than surgical patients to have clinically identified and more severe macro- and/or micro-vascular disease at baseline. Unadjusted 5-year survival estimates were more favorable in the bariatric surgical group ($96\pm 1\%$) compared to medically treated patients ($80\pm 1\%$; log-rank $p<0.001$). After adjusting for differences in demographic characteristics and baseline health status, bariatric surgery was associated with an estimated 67% reduction in all-cause mortality (HR=0.33, 95% CI: 0.25-0.43). Surgery was also associated with favorable outcome estimates for the first occurrence of both end-stage macrovascular (HR=0.41, 95% CI: 0.28-0.59) and microvascular (HR=0.25, 95% CI: 0.13-0.49) events. For each study endpoint, T2DM disease progression proved an independent predictor of negative outcome [prior macro/micro events, mortality HR (95% CI)=2.45 (2.15-2.79); macro HR (95% CI)=2.46 (1.76-2.09); micro HR (95% CI)=3.10 (2.30-4.19)]; however, the relative benefits associated with bariatric surgery remained reasonably constant across the disease progression (Table 1). **Conclusions:** Bariatric surgery is associated with a 67% reduction in the hazard of all-cause mortality among severely obese patients with T2DM. Moreover, bariatric surgery is associated with 60-75% reductions in the end-stage vascular complications of T2DM. Although earlier intervention in the disease process affords the best long-term outcomes, in appropriately selected patients, regardless of the timing of surgery in the disease progression, bariatric surgery remains a consistent independent predictor of improved survival. Prospective studies are needed to confirm these results and to appropriately evaluate the causal role of bariatric surgery in these observed associations.

A-104-OR TEAMWORK AND HARD WORK MAKES P4P WORK FOR RYGB

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*Minimally Invasive Surgery*¹
*Geisinger Medical Center*²
*Geisinger Medical Center*³

Background: Health care in the US is in crisis. It will soon consume 20% of the US GDP. Stakeholders remain at odds over solutions which have largely been imposed on hospitals and providers. A frequent concern of providers has been that any form of capitated care will compromise quality and not be financially sustainable. In 2009, we presented to the ASMBMS our experience implementing a P4P program for RYGB (ProvenCare®). The aim of this study was to evaluate the clinical results of this fully implemented P4P program for RYGB. **Methods:** In 2006, our group began developing a clinical program of 35 best practice elements (BPE) for RYGB. The reliable delivery of BPE's was defined as a patient receiving > 90% of elements. A control group included all patients for the year preceding ProvenCare® (Period 1). BPE delivery was unreliable in the first year (Period 2) and reliable in the following years (Periods 3, 4, 5). Outcomes data was collected prospectively on a cohort of patients who had undergone RYGB between May 2007 and Apr 2012 and was compared using Student's t-test. Reliability was tested using Cochran-Armitage trend test.

Results: A total of 2096 patients were involved in the study as outlined in the table. There were no significant patient demographic differences between the periods. ProvenCare® BPE reliable delivery was only 40% in Period 2 but was > 90% for Periods 3, 4, 5 (p<0.001). LOS for Period 1 was 3.5 days and improved to 2.01 days (p<0.001) in Period 5. LOS < 2 days was significantly correlated with reliable delivery of BPE's (p=0.026). Post-operative complications and readmission rates significantly improved from Period 1 to Period 5. Complication improvements were also statistically associated with >90% reliability (p=0.0003). ICU utilization and reoperations also improved during the study period. Overall mortality was 0.68% and 0.29% for Period 5. Mortality not significantly different for any of the time periods. During the study, net revenues fell by 8% with variable direct costs rising by 33%. The result was a 32% drop in the contribution margin. However the contribution margin was still 47% for Period 5. Payor reimbursement was stable with ProvenCare®.

Conclusions: The rising cost of health care in the US is unsustainable. New care delivery models are inevitable, yet these are routinely met with

considerable skepticism. In 2006, our group endeavored to create a best practice program for RYGB as a foundation for the health plan's commercial product (ProvenCare®). This program was embedded in a multi-disciplinary bariatric practice with > 90% reliability. The reliable delivery of this care correlated significantly with broad patient benefits, the result was improvement in all outcomes measures, while maintaining both a satisfactory contribution margin and payer reimbursement. We next need determine if this program is transferable.

A-105-OR BARIATRIC SURGERY AND DIABETES REMISSION IN SWEDISH OBESE SUBJECTS.

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Background: Bariatric surgery has been shown to cause diabetes remission over 1-2 years in 40 to 90 percent of operated patients but long-term effects over 10 to 15 years have so far not been reported. **Methods:** The intervention study Swedish Obese Subjects (SOS) examines mortality and other outcomes over up to 20 years in 2010 obese patients obtaining bariatric surgery (banding 18.7%, vertical banded gastroplasty 68.1%, gastric bypass 13.2 %) and 2037 contemporaneously matched obese controls obtaining usual care. For the current report we used the 345 surgery patients and the 262 controls that had type 2 diabetes at baseline. Diabetes remission was a predefined secondary endpoint in the SOS study protocol. At baseline, the surgery and control patients had the following mean characteristics: age 49 and 50 years, body mass index 42 and 40 kg/m², fasting blood glucose 156 and 156 mg/dl, and diabetes duration 3.0 and 3.5 years, respectively. The current report is focusing on diabetes remission at 2 years and on subsequent relapse rates. **Results:** The proportion of surgery and control patients in diabetes remission at 2 years was 71.8 and 16.4 percent, respectively (adj. OR: 13.0, p<0.001). The high remission rate 2 years after bariatric surgery was followed by frequent relapses and at 15 years the proportion in remission was reduced to 31%. However, this proportion was markedly higher than in controls (OR=6.0, p<0.001). **Conclusions:** Bariatric surgery is superior to usual care in achieving 15-year remissions.

A-106-OR MECHANISM OF REVERSED GLUCOSE INTOLERANCE AFTER ROUX-EN-Y GASTRIC BYPASS (RYGB)

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*Medicine*¹

Background: Morbid obesity has increased to epidemic proportions, and is the main cause of type 2 diabetes mellitus (T2DM) which is characterized by inadequate insulin secretion from the β -cells and development of insulin resistance. Bariatric surgery is the most effective treatment for reduction of body weight and has also been suggested as a treatment modality for the resolution of T2DM, independent of morbid obesity. Despite increased recognition of normalization of fasting plasma glucose levels (< 100 mg/dl) promptly after surgery, it is unclear what is/are the mechanism(s) responsible for the "cure". Therefore we assessed hormonal and tissue responses longitudinally after RYGB. **Methods:** Eight patients (five with T2DM) were studied before and at 1, 3, 6, 12 and 15 months after RYGB. A standardized test meal (STM, 475 cc of Ensure Plus) was administered to assess glucose, insulin and incretin responses. Separately, a 2 hr. hyperinsulinemic-euglycemic clamp (E-clamp) (+ 1200 pmol/L) and 2 hr. hyperglycemic clamp (H-clamp) (+5.3 mmol/L above basal) were performed with one hour recovery between clamps. GLP-1 was infused (+50 pmol/L) during the last hour of the hyperglycemic clamp. Hepatic and peripheral insulin sensitivities were assessed with 3H-3 glucose infusion. Body composition (iDXA and 3H₂O) were assessed at each visit. **Results:** Subject age was 46.0 \pm 3.4 years, BMI 48.9 \pm 3.2 kg/m², FPG 138.2 \pm 18.1 mg/dl (T2DM) and 88.3 \pm 0.8 mg/dl non-diabetic. STM glucose responses normalized by 3 months; insulin responses normalized by 6 months. Active GLP-1 level, unchanged from basal level pre-surgery, increased dramatically at 1, 3 and 6 months (peak ~58 pmol/L), normalized by 12 and 15 months (peak ~25 pmol/L). Insulin sensitivity (90-120 min M of E-clamp) increased progressively from a rate of 2.2 pre-surgery to ~5.2 mg/kg/min at 3-12 months as fat mass decreased (~60 kg pre to 25 kg, fat free mass remained unchanged). During E-clamps hepatic glucose production was suppressed by 3 months. The insulin response to glucose alone fell progressively over 12 months (~420 to ~120 pmol/L) but the glucose clearance/metabolism (30-60 min M of H-clamp) did not change significantly until 12 months (~3.8 pre to 7.8 mg/kg/min at 12 months). During GLP-1 infusion, plasma insulin level fell progressively from ~3200 pmol/L to ~700 pmol/L at 12 months. During the last 30 min of the H-clamp M/I changed from pre level of ~9 ((mg/kg/min)/ (pmol/L)) to a level of 30 at 12 months. **Conclusions:** The early exaggerated endogenous GLP-1 response results in

increased insulin responses to nutrients, and explains the early normalization of glucose levels. The GLP-1 response normalizes within one year after surgery. Enhanced peripheral tissue sensitivity to insulin starts at three months with loss of fat mass. β -cell sensitivity to glucose improves last at 12 months after surgery, and after loss of ~33% of excess body weight. Normalization of β -cell sensitivity to glucose follows recovering tissue sensitivity to insulin, and may be causally related. There is a tightly controlled feedback loop between peripheral tissue sensitivity, β -cell and L-cell (GLP-1) responses.

A-107-OR SLEEVE GASTRECTOMY AND ANTIREFLUX BARRIER

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*Hospital Italiano de Buenos Aires*²

Background: Sleeve gastrectomy has gained an important place in bariatric surgery. However it has been postulated a deleterious effect on the lower oesophageal sphincter (LES) function, increasing the risk of gastro-oesophageal reflux disease (GERD). An objective analysis was never made on this topic. **Methods:** 32 patients with sleeve gastrectomy in which antireflux barrier was evaluated before and 1 year after surgery. 29 were women (90.6%) and mean age was 50 \pm 2.1 years. All patients were studied before surgery with upper-endoscopy, barium swallow, oesophageal manometry and 24-hour pH-monitoring. Sleeve gastrectomy was constructed laparoscopically over a 37 fr bougie. Staple line was reinforced in every case. After 1 year all patients repeated objective evaluation. BMI, Excess weight loss (%EWL), reflux symptoms and need of proton pump inhibitors (PPI) were also registered. Wilcoxon test was used for paired variables, chi square and linear correlation test were used. **Results:** BMI decreased from 42.8 kg/m² to 29 kg/m². Median EWL%-1y was 80.8%. There was a strong correlation between preoperative BMI and EWL% year (Spearman Rho -0.5253, p=0.0029). Before surgery 24 patients (75%) didn't have esophagitis. Of these, 7 (29.2%) developed mucosal injury. 6/8 (75%) persisted with or worsened preoperative esophagitis (p= 0.068). Before surgery 13 patients (40.6%) referred frequent heartburn vs... 4 (12.5%) at 1 year (p=0.18). Use of PPI at 3 months was 56.2% (18 patients), at 6 months 46.8% (15 patients) and 25% (8 patients) at 1 year. LES pressure decreased from 20 to 15.5 mm Hg (p=0.058). Among patients with preoperative normal LES a median decrease of 7 mm Hg was observed (p=0.016). Median DM score showed no significant differences (14.6 vs... 15.1, (p=0.44), nor upright or supine % of time with pH <4). 49% of patients before vs.. 74% after surgery

presented gastroesophageal reflux in contrast swallow ($p=0.018$). There was no correlation between preoperative BMI, EWL%, preoperative symptoms, hypotensive LES or pathological DM score, with postoperative oesophagitis, reflux symptoms, abnormal pH monitoring or IBP requirements at 1 year. Patients with abnormal DM score prior to surgery presented less weight lost (EWL 68.3% vs... 96%, $p=0.015$). **Conclusions:** In our experience sleeve gastrectomy determined a decrease in basal LES pressure in patients with normal preoperative values. Oesophagitis appeared in 29% of those who did not have it. 25% of patients at 1 year were using PPI for reflux symptoms, whereas half of them did not achieve adequate control. We did not observe significant variations in pH monitoring parameters before and 1 year after surgery. We could not find preoperative predictive factors for postoperative GERD.

A-108-OR LAPAROSCOPIC SLEEVE GASTRECTOMY OR LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IN PATIENTS WITH EXTREME OBESITY? 30-DAY MORBIDITY AND MORTALITY COMPARISON: A NSQIP DATABASE ANALYSIS.

Edward J Hannoush¹; Stephanie G Wood, MD¹;
Andrew J Duffy, MD¹; Geoffrey S Nadzam, MD¹; Kurt
Roberts, MD¹
Yale School of Medicine¹

Background: Bariatric surgery in patients with extreme obesity is feasible and safe but constitutes a special challenge. Increasing body mass index has been shown to be a risk factor for morbidity and mortality. Many advocate performing Laparoscopic Sleeve Gastrectomy (LSG) in lieu of Laparoscopic Roux-en-Y gastric bypass (LRYGB) in the extremely obese due to its lower difficulty and the assumed decreased morbidity and mortality. This study compares the short-term safety profile of LSG vs... LRYGB in patients with BMI50 kg/m² and BMI60 kg/m² using prospectively collected data by the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP).

Methods: Using the 2010 and 2011 ACS-NSQIP participant use data files, patients with BMI50 kg/m² and BMI60 kg/m² that underwent either LSG or LRYGB were identified. For both BMI groups, univariate analyses were conducted using two-tailed t-tests and Fisher's exact or chi-squared tests to compare the relative frequencies of continuous and categorical outcome variables, respectively, between patients undergoing LSG vs... LRYGB. Primary outcomes included 30-day post-operative mortality, occurrence of major post-operative complications and need for reoperation. Secondary outcomes included peri-operative variables and 30-day post-operative

complications. **Results:** A total of 6,365 patients that underwent LSG or LRYGB with a BMI50 kg/m² (LSG = 1,345, LRYGB = 5,020) were identified. Of this, 1,425 patients had a BMI60 kg/m² (LSG = 334, LRYGB = 1,091). Comorbidities were similar except for a greater proportion of patients with diabetes in the LRYGB patients (31.4% vs... 27.7%, $p < 0.01$). No significant differences were found in mortality or occurrence of major complications between patients undergoing LSG and LRYGB (0.30% vs... 0.24%, OR 1.24 [95% CI: 0.4 " 3.8], $p = 0.70$; and 3.56% vs... 4.33%, OR = 1.21 [95% CI: 0.8 " 1.6], $p = 0.24$). Patients that underwent LRYGB were found to have a statistically significantly higher rate of return to the OR within 30-days at the 0.05 level (OR 1.75 [95% CI: 1.1 " 2.8], $p < 0.05$). Length of operative time and post-operative length of stay were significantly lower in patients undergoing LSG as compared to LRYGB both in the BMI50 kg/m² group (109.15 min vs... 139.16 min, $p < 0.01$; and 2.25 days vs... 2.49 days, $p < 0.01$) and the BMI60 kg/m² subgroup (117.87 min vs... 145.46 min, $p < 0.01$; and 2.32 days vs... 2.83 days, $p < 0.01$). **Conclusions:** Despite its higher technical difficulty, LRYGB does not have a higher 30-mortality and incidence of major complications when compared to LSG in patients with BMI50 kg/m² and BMI60 kg/m². There is however, a higher risk of requiring reoperation within 30-days after LRYGB. Both LSG and LRYGB are safe surgical alternatives for weight loss surgery in patients with extreme obesity.

A-109-OR IMPACT OF ACCREDITATION IN BARIATRIC SURGERY

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Background: A recent study questioned the role of accreditation in bariatric surgery and the need for accreditation is currently being evaluated by CMS. The primary goal of this study was to examine the outcomes of bariatric surgery performed at accredited (AC) vs... non-accredited (NAC) centers. The secondary goal was to examine the outcomes of morbidly obese patients undergoing general laparoscopic surgical operations performed at AC vs... NAC. We hypothesized that bariatric accreditation may improve outcome for patients undergoing bariatric surgery and also may have a secondary benefit of improving outcomes of obese patients undergoing laparoscopic general surgical operations. **Methods:** Using the National Inpatient Sample database from 2008-2010, clinical data of morbidly obese patients who underwent bariatric surgery (open gastric bypass, laparoscopic gastric bypass, laparoscopic sleeve gastrectomy, and laparoscopic gastric banding) were analyzed using appropriate ICD-9 diagnosis and procedural codes. Outcomes of patients who underwent bariatric surgery

(length of stay, serious morbidity, in-hospital mortality, and cost) were analyzed according to hospital's accreditation status. Outcomes of morbidly obese patients who underwent common laparoscopic general surgery operations (antireflux surgery, cholecystectomy, colectomy, and diaphragmatic hernia repair) were also analyzed according to accreditation status. **Results:** There were 277,068 bariatric operations performed between 2008-2010, with 88.1% being performed within accredited centers and 11.9% being performed at non-accredited centers. There were more gastric bypass procedures performed at AC than at NAC (72.4% vs... 67.5%, respectively). The overall rate of in-hospital mortality was significantly lower at AC than at NAC (0.08% vs... 0.19%, respectively). For patients who underwent stapling operations (sleeve and bypass), the in-hospital mortality was significantly lower at accredited hospitals (0.09% vs... 0.27% at NAC). On multivariate analyses, non-accredited centers had significantly higher in-hospital mortality for stapling procedure (odds ratio, 3.7; $p < 0.01$) but a similar rate of serious morbidity (odds ratio, 0.87; $p = 0.1$). There was no significant difference in in-hospital mortality or serious complication for patients who underwent gastric banding at AC vs... NAC. Using multivariate logistic regression analyses, morbidly obese patients who underwent common laparoscopic general surgical operations at NAC had higher serious complication for patients who underwent laparoscopic cholecystectomy (odds ratio, 2.4; $p = 0.05$) and diaphragmatic hernia repair (odds ratio, 2.3; $p = 0.05$) compared to AC. There was no significant difference in risk-adjusted serious complication rate for laparoscopic antireflux and colectomy between AC vs... NAC. **Conclusions:** Centers with accreditation in bariatric surgery had almost a four-fold lower in-hospital mortality compared to non-accredited centers. This finding was observed only for complex operations such as laparoscopic gastric bypass and sleeve gastrectomy. The resources established for accreditation may have secondary benefits that lead to improved outcomes for morbidly obese patients undergoing other general laparoscopic operations.

**A-110-OR
LAPAROSCOPIC SLEEVE GASTRECTOMY
VERSUS GASTRIC BYPASS FOR THE
TREATMENT OF TYPE 2 DIABETES
MELLITUS IN MILD OBESE PATIENTS: 5-
YEAR RESULTS OF A RANDOMIZED
TRIAL**

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Ching-Yun University, Taiwan²

Background: Metabolic surgery was proposed as a treatment option for diabetes in mild obese patients.

This study was to compare the efficacies of two weight reducing surgeries on diabetic control and the role of duodenal exclusion. **Methods:** Thirty diabetic patients with a mean BMI of 30(24-34), mean age of 45 (34-58) and mean HbA1C of 10.0 (7.5-15) were randomized to either LSG (n=30) or LGBP (n=30). The primary outcome was remission of T2DM (fasting glucose < 126 mg/dl and HbA1c value $< 6.5\%$ without glycemic therapy). Analysis was by intention-to-treat. Mixed meal test were given to all the patients and different gut hormones were measured as well as incretin effect. **Results:** There was no difference in preoperative clinical parameters between the two groups. After 5 years of follow-up, Remission of T2DM was achieved by 16 of 22 (72.7%) in the gastric bypass group and 12 of 28 (42.8%) in the sleeve gastrectomy ($p < 0.05$). Participants assigned to gastric bypass had lost more weight, achieved a lower level of BMI (23.6 vs... 24.5) and HbA1C (6.1% vs... 6.5%) than sleeve gastrectomy groups. There was no difference in incretin effects between the groups. Both LSG and LGBP had GLP-1 effect after surgery but LSG had a better ghrelin reduction where LGBP had a better reduction in CCK and PP reducing effects. **Conclusions:** This study demonstrates that participants randomized to gastric bypass were more likely to achieve a durable remission of T2DM. Duodenum exclusion does play a role in T2DM diabetes treatment. This study was registered at clinicaltrials.gov (ID NCT00540462).

Monday, November 11, 2013

8:00 am – 12:00 pm EST

**Oral Presentations: Masters Course in
Behavioral Health**

A-101-BH

**BARI-ACTIVE: A RANDOMIZED
CONTROLLED TRIAL OF A
PREOPERATIVE BEHAVIORAL
INTERVENTION TO INCREASE PHYSICAL
ACTIVITY IN BARIATRIC SURGERY
PATIENTS**

Dale S Bond, PhD; Jennifer Trautvetter¹; Graham Thomas, PhD¹; Jessica L Unick, PhD¹; Sivamainthan Vithiananthan, MD¹; John M Jakicic, PhD²; Dieter Pohl, MD³; Beth A Ryder, MD⁴; Rena R Wing, PhD⁴

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Background: Habitual physical activity (PA) may optimize bariatric surgery outcomes; however, studies with objective PA measures show that bariatric surgery patients have low PA levels preoperatively and fail to substantially increase PA postoperatively. Thus, patients need additional support to perform habitual PA. The Bari-Active trial tested a preoperative intervention to increase habitual PA. **Methods:** Participants (n=51, 88% women, 82% White, age=47.2±9.0 years, BMI=45.1±6.7) were randomly assigned preoperatively to 6 weeks of PA intervention (PAI/n=28) or standard care (SC/n=23). PAI received weekly individual face-to-face sessions involving tailored instruction in behavioral strategies (e.g., self-monitoring, goal-setting) to increase home-based structured walking by 30 minutes/day. SC attended routine clinical visits but received no intervention. Participants wore a multi-sensor monitor for 7 days at baseline and post-intervention to measure changes in bout-related (±10-min bouts) and total (±1-minute bouts) moderate-to-vigorous PA (MVPA) minutes/day. **Results:** Retention at post-intervention was 80% in PAI and 82% in SC. PAI achieved a 21.5±22.7 minutes/day increase in bout-related MVPA at post-intervention (4.4±5.8 to 25.9±23.6 minutes/day), compared to no change (-0.7±15.7 minutes/day; 9.6±19.1 to 8.9±12.3 minutes/day) in SC (p=0.001). Similarly, PAI increased total MVPA from 29.2±23.0 to 57.5±32.8 minutes/day whereas SC demonstrated no change (40.4±39.7 to 40.6±31.1 minutes/day) (p=0.001). **Conclusions:** With behavioral intervention, severely obese patients can increase their PA to levels approximating national recommendations prior to bariatric surgery. Thus, the preoperative period may be a powerful “teachable moment” for promoting habitual PA. Future studies should determine whether preoperative PA increases are maintained postoperatively and contribute to better surgical outcomes.

A-102-BH

DISTRESS CORRELATES AND OVERALL FUNCTIONING IN BARIATRIC SURGERY PATIENTS WITH NIGHT EATING SYNDROME

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Background: Night eating syndrome (NES) is a relatively understudied disorder. It is conceptualized as a circadian delay in food consumption, manifested by evening hyperphagia and/or nocturnal awakenings with food ingestion. Associated symptoms include insomnia, morning anorexia, urges to eat at night, depressed evening mood, and a belief that one must eat to sleep. Despite its association with obesity, little is known about NES in the bariatric surgery population. Therefore, the present study examined emotional, behavioral, thought, and somatic functioning in preoperative bariatric surgery patients with and without NES. **Methods:** Within the context of an initial psychological evaluation for bariatric surgery, 880 preoperative patients completed the MMPI-2-RF and were evaluated for NES using research diagnostic criteria proposed by Alison et al. (2010). Medical records were reviewed for demographics and BMI. Of the 880 patients, (66.66 % Caucasian; Mean Age = 46.87; Mean BMI = 50.50 kg/m²; Mean Education = 14.32 years) 14.66% met criteria for NES. **Results:** There was a significant effect of NES status on the combined variable of overall functioning; measured by the Higher-Order Clinical MMPI-2-RF scales, F (3, 875) = 2.35, p = .000. Examination of univariates demonstrated that NES+ had significantly greater elevations on the Emotional/Internalizing and Behavioral/Externalizing Scales. There was also a significant effect of NES status on the combined measure of psychiatric symptoms and general distress as measured by the Restructured Clinical MMPI-2-RF scales, F (9, 869) = 3.71, p = .000. Using a Bonferroni adjusted alpha level of .006, analyzes showed there was a significant contribution from the somatic and hypomanic subscales; with NES+ endorsing higher values on these scales. NES status also had an effect on the combined variable of somatic/cognitive complaints measured by the Somatic/Cognitive Complaint Scales, F (5, 873) = 6.69, p < .0005; p = .000. Examination of univariates using a Bonferroni adjusted alpha levels of .01 demonstrated that NES+ demonstrated significantly higher scores on the Malaise, Gastrointestinal, Head Pain, and Neurological Complaints subscales. No differences were noted on demographics, BMI or Internalizing Scales. **Conclusions:** Patients diagnosed with NES

may have decreased functioning and higher psychological distress across several important domains when compared to patients without NES pursuing weight loss surgery. These results suggest that patients with NES may be more psychiatrically and medically vulnerable than other patients seeking surgery. Research is needed to better understand how somatic/neurological and NES symptoms interrelate. The current results also underscore the need to elucidate how differences between patients with and without NES may impact surgery outcomes, including compliance, overall functioning, and weight loss as well as the importance of examining the impact of NES treatment on outcomes.

A-103-BH

BIPOLAR DISORDER SYMPTOMS IN PATIENTS SEEKING BARIATRIC SURGERY AND THEIR RELATIONSHIP TO UNDERGOING BARIATRIC SURGERY

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Background: Up to 68% of patients with Bipolar Disorder (BD) are obese, for which bariatric surgery is currently the most effective long-term treatment. The prevalence of BD in patients seeking bariatric surgery varies and little data exist regarding how bipolar symptoms influence surgical outcomes. Our aim was to examine the prevalence of bipolar symptoms and their association with psychological variables, eating behaviors and weight, and six-month bariatric outcomes in patients seeking bariatric surgery.

Methods: Adult outpatients seeking bariatric surgery underwent psychological evaluation between 4/2009 and 2/2011. The Primary Care Mood Disorder Questionnaire (MDQ) was used to screen for lifetime symptoms of mania/hypomania. Additional instruments assessed unipolar depression, anxiety, alcohol use, childhood trauma, emotional overeating, and distress tolerance. We examined relationships of bipolar symptoms to demographics, weight, and psychological variables at baseline and to weight and attendance at 6 month postoperative follow-up (for those with available data). Medical records of patients

with bipolar symptoms who did not undergo bariatric surgery were reviewed for potential barriers to surgery completion. **Results:** 935 patients (92% Caucasian, 47 \pm 12 years of age, BMI of 47 \pm 9) completed the pre-surgical psychological evaluation and 188 underwent RYGB and had six-month post-surgical data available. Six percent (n=54) screened positive for symptoms of bipolar disorder. Patients with bipolar symptoms described more depression, anxiety, alcohol misuse, history of abuse, and less distress tolerance than patients without bipolar symptoms. Patients with bipolar symptoms also had less excess body mass index loss at six months after bariatric surgery, although the number who completed RYGB was small (n=7). Less than 20% of the patients with bipolar symptoms had undergone bariatric surgery at the time of analysis (n = 12), yet only 13% were denied surgery by the bariatric team for psychiatric reasons. Of the patients with bipolar symptoms who did not complete surgery, one in four was psychiatrically hospitalized within the year following their psychological evaluation, derailing their pursuit of bariatric surgery. **Conclusions:** The prevalence of bipolar symptoms was more common than reported for the general population and those with bipolar symptoms reported more robust psychopathology. Few patients with bipolar symptoms actually completed bariatric surgery. In the current study, factors that influenced surgery completion include more psychological recommendations at evaluation, psychiatric instability, and difficulty completing a standardized behavioral pre-surgical program. Of those that actually undergo bariatric surgery, patients with bipolar symptoms may lose less weight at six months postoperatively.

A-104-BH

FOOD CRAVINGS IN INDIVIDUALS SEEKING BARIATRIC SURGERY VS... BEHAVIORAL OBESITY TREATMENT

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Background: While previous research has found that higher body mass index (BMI) is positively associated with food cravings in adults, little is known about food cravings in individuals seeking bariatric surgery versus individuals pursuing non-surgical obesity

treatment. This investigation compared total number of foods craved and food craving frequency in pre-operative bariatric surgery participants and overweight/obese participants prior to starting behavioral obesity treatment. **Methods:** Fifty-four surgical participants (42.7 +/- 10.5 yrs.; 46.9 +/- 8.9 kg/m² BMI; 77.8% female; 94.3% white; 44.4% married) were matched by gender to 54 overweight/obese participants (52.2 +/- 8.2 yrs.; 35.1 +/- 4.4 kg/m² BMI; 77.8% female; 85.2% white; 77.8% married) enrolled in a behavioral obesity trial. Measures were number of foods craved and number of food cravings during the previous week. Food Craving Inventory (FCI) measured craving frequency of different categories of foods, using a 5-point Likert scale, during the past month. Three-day dietary intake was assessed. Measures were collected pre-operatively (surgical participants) and at baseline (trial participants). **Results:** Analyses, controlling for age and marital status group differences, showed significantly ($p < 0.05$) greater number of foods craved weekly (4.2 +/- 1.9 foods vs... 2.6 +/- 1.4 foods) and number of cravings weekly (17.9 +/- 17.7 cravings vs... 7.1 +/- 9.4 cravings) in surgical vs... trial participants. The FCI found significantly ($p < 0.05$) greater frequency of sweet cravings (2.8 +/- 0.8 vs... 2.2 +/- 0.8) for trial vs... surgical participants. No difference in daily energy (1723 +/- 597 kcal/day) or energy from fat (36.7 +/- 6.9%) was found between groups, but surgical participants consumed significantly ($p < 0.05$) less energy from carbohydrate (41.9 +/- 9.3% vs... 47.1 +/- 9.0%) and more energy from protein (21.0 +/- 5.8% vs... 17.0 +/- 4.6%) than trial participants. **Conclusions:** Prior to treatment, bariatric surgery patients may experience more cravings, both in total number of foods and number of cravings, than overweight/obese patients seeking non-surgical obesity treatment. Differences in the types of foods craved may occur between the groups, which may reflect variations in dietary intake.

A-105-BH

VERBAL ABUSE: A RISK FACTOR FOR DEPRESSION IN PRE-SURGICAL EVALUATIONS

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Background: The incidence of suicide is increased following bariatric surgery, highlighting the need to identify reliable risk factors. Although depression is one of the largest risk factors for suicide in the general population, depressive symptoms are often underreported in pre-bariatric surgery psychological evaluations, thus limiting their predictive utility. However, childhood verbal abuse is much more common in pre-bariatric surgery patients. Accordingly, the authors sought to 1) examine the use of childhood verbal abuse a predictor of depressive symptoms and the need for psychological services, and 2) investigate the necessity of multi-modal assessment of childhood verbal abuse. **Methods:** We conducted a retrospective chart review of 121 patients who received a pre-bariatric surgery psychological evaluation. Their age ranged from 19 to 69 (M = 43.36, SD = 12.04), and their BMI ranged from 34.17 to 67.09 (M = 46.44, SD = 7.20). We obtained information as follows: (a) childhood verbal abuse from 3 measures (the Childhood Trauma Questionnaire (CTQ), the Eating Disorder Questionnaire (EDQ), and a question from a semi-structured interview); (b) personality characteristics from the Millon Behavioral Medicine Diagnostic (MBMD) questionnaire; and (c) depressive symptomatology from the Depression Anxiety Stress Scales-21 (DASS-21). **Results:** Overall, 49.6% of patients endorsed abuse on at least one measure; 36.5% on the CTQ, 30.5% on the EDQ, and 28.5% in the semi-structured interview (20% on 1 measure, 18% on 2 measures, 13.5% on 3 measures). Endorsing abuse on a greater number of measures was associated with an increase in severity of depressive symptoms on the DASS Depression subscale ($r(120) = .33, p < .001$) and on the MBMD Depression, Dejected, and Psych Referral subscales (r 's (116) = .24 ($p = .01$), .31 ($p = .001$), and .25 ($p = .007$), respectively). Analyzed a different way, presence of any abuse significantly predicted DASS depression, $F(1, 119) = 6.87, p = .01$ ($\beta = .23$). However, when the number of measures on which an individual reported emotional abuse was added to the model, the model strength increased significantly, $F(1, 118) = 9.02, p < .001$. Similar results emerged using the MBMD Depression and Denigrated subscales. Lastly, reporting abuse on all 3 measures was associated with a significant increase in likelihood of a mood disorder diagnosis as compared to no endorsement, OR = 6.44, Z = 2.25, $p = .02$. **Conclusions:** Multi-modal assessment of childhood verbal abuse in pre-bariatric surgery psychological

evaluations is important because 1) the likelihood of reporting abuse across measures is similar, but lower than the overall prevalence, suggesting no differential sensitivity among the measures, 2) the use of multiple measures led to an increase in prediction of depressive symptoms, and 3) it can help identify individuals with a high risk for depressive symptoms, and thus, suicide. The identification of childhood verbal abuse as a risk factor is especially important in this population, as social desirability may lead bariatric patients to underreport current psychological symptoms.

A-106-BH

AN IN-DEPTH ANALYSIS OF RATES OF PSYCHOPATHOLOGY IN BARIATRIC SURGERY CANDIDATES USING STRUCTURED INTERVIEWS

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Background: Psychopathology rates generally have been found to be quite high among candidates for bariatric surgery. However, only a small number of these studies have used structured diagnostic instruments. The purpose of this review will be to review these studies in detail, in particular focusing on comparisons between the rates obtained in these studies with rates obtained using structured interviews in non-bariatric obese samples, and in general population samples, in the United States and other countries where such data are available. The paper will address whether or not socio-demographic variables may be affecting the rates obtained.

Methods: Literature regarding rates of psychopathology using structured diagnostic interviews from samples in the United States, Germany and Italy were reviewed. Socio-demographic characteristics of the samples utilized in each of the bariatric surgery studies were also examined in detail. Sources of information included data in published research as well as databases available in the literature or over the web. **Results:** Clearly the rates of psychopathology appear to be elevated among the obese seeking bariatric surgery. Some of this may be attributable to the severity of the obesity among these individuals and some to obesity-related psychopathologies such as diabetes, which

carry an increased risk for psychopathology. Lifetime rates for Axis I disorders have varied from 36.8 to 72.6 and for current Axis I psychopathology from 20.9 to 55.5. The distribution of the common categories across these studies were fairly consistent. The results of these studies were compared with the data obtained by the National Comorbidity Survey-Replication Study (NCS-R) and the European Study of Epidemiology of Mental Disorders (ESEMeD). Overall, rates were higher among bariatric samples compared to the control groups. Three of the studies were done independently of the routine psychiatric evaluation prior to bariatric surgery while in two studies rates may have been affected by "impression management" since they were part of the routine evaluation. Areas which were not well covered included the spectrum of eating disorders, which varied among the studies, and the somatoform, psychotic and adjustment disorders. Some differences may also be attributable to socio-economic status of the samples used. **Conclusions:** Although a limited number of studies have been done, the extant bariatric surgery samples have used reasonably large sample sizes. All used the same structured clinical interviews and they were reported from several different countries. Limitations have included the lack of BMI-matched control groups, and that not all did the evaluations independent from the evaluation process. Also very little information was reported on comorbidities and medications.

Tuesday, November 12, 2013

8:00 am – 12:00 pm EST

A-107-BH

COURSE OF DEPRESSIVE SYMPTOMS AND TREATMENT IN THE LONGITUDINAL ASSESSMENT OF BARIATRIC SURGERY (LABS-2) COHORT

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Background: Depressive symptoms and affective disorders are commonly seen among severely obese adults, particularly those electing to undergo bariatric surgery. Studies comparing pre- to post-operative rates of depressive symptoms and depressive disorders have generally found decreases in both the severity of the symptoms and in the rate of affective disorder diagnoses. However, the durability of improvement in depressive symptoms and changes in treatment for depression following bariatric surgery are not well described. **Methods:** The Longitudinal Assessment of Bariatric Surgery-2 (LABS-2) is an observational cohort study of adults (n=2,458) who underwent bariatric surgery at one of ten US hospitals between 2006-9. This analysis includes 2,146 participants who completed the Beck Depression Inventory (BDI) at baseline and at one follow-up visit (6 months, 1, 2 or 3 years). Research questionnaires assessed treatment (i.e., counseling and medication) for depression. Linear and general linear mixed models used all available observations. **Results:** At baseline, 28.3% reported mild-to-severe depressive symptoms (BDI score ≥ 10); moderate and severe symptomatology (BDI=19-29 and 30-63, respectively) were rare (4.2% and 0.5%, respectively). 40.4% reported treatment for depression (35.3% antidepressant use, 14.6% counseling). Having mild-severe depressive symptoms markedly increased odds of postoperative depressive symptoms (OR=6.8; 95% CI=5.5-8.4; $p < .0001$). Symptom severity was significantly lower at all post-op time points compared to pre-op ($p < .001$) (e.g., prevalence of mild-severe symptoms was 8.9%, 6 months; 8.4%, 1yr.; 12.2%, 2yr.s; and 15.6%, 3yr.s). There was a statistically significant increase in depressive symptom severity between 1 and 2 yrs. ($p < .001$), and 2 and 3 yrs. ($p < .01$). Treatment for depression was modestly but significantly lower postoperatively (32.0%, 1yr.; 33.1%, 2yr.; 34.6%, 3yr.; $p < .01$) and did not significantly differ by post-op year ($p > .05$). Although there were minor differences between surgical procedures in change in depressive symptoms and treatment from baseline to 1 yr. ($p < .05$), changes were not statistically significant from baseline to 2 or 3

ys. ($p > .05$). Change in BDI score over time was significantly but weakly associated with change in body mass index ($r = .15$; $p < .001$); the association was stronger among those with greater symptomatology at baseline ($r = .48$; $p < .001$ among those with a baseline BDI score ≥ 9). **Conclusions:** Bariatric surgery has a positive impact on depressive features. However, data suggest some deterioration in improvement after the first year. Longer follow-up of this cohort will be important to understand the durability of this effect.

A-108-BH

CHANGES IN SEXUAL FUNCTIONING AND SEX HORMONES IN MEN WHO UNDERGO BARIATRIC SURGERY

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Background: A number of studies have suggested that a modest weight loss is associated with improvements in sexual functioning and sex hormones in men. Relatively few studies have investigated changes in these domains in relation to the substantially larger weight losses seen with bariatric surgery. This study investigated changes in sexual function and hormones among men who underwent bariatric surgery in comparison to men with obesity who were treated with lifestyle modification. **Methods:** Thirty-five men (median age [interquartile range] 49 years [40-56], BMI 44.9 kg/m² [41.8-51.4]) underwent bariatric surgery (BS) and 25 men (median age 46 years [36-54], BMI 41.0 kg/m² [38.0-43.0]) were treated with lifestyle modification (LM). Prior to surgery or treatment and at 12 and 24-months, sexual functioning was assessed with the International Index of Erectile Functioning (IIEF). Changes in quality of life, body image, depressive symptoms and marital satisfaction also were assessed by validated questionnaires. Sex hormones (total and free testosterone, leutenizing hormone

(LH), and sex hormone binding globulin (SHBG)) were measured by blood assays. **Results:** The average (95% confidence interval) initial percent weight loss at 24-months for BS participants was -29.9% (-33.4%, -26.4%), which was significantly greater than the weight loss for LM participants -4.7% (-10.0%, 0.6%) ($P=0.02$). After adjusting for baseline differences, there were significant changes in erectile and orgasmic function and overall satisfaction over time, but these changes were not significantly different between treatment groups. Change in sexual desire was negatively correlated with change in BMI ($r=-0.53$, $P=0.004$). Changes in sex hormones over time were significantly different between LM and BS participants for total testosterone ($P=0.001$), LH ($P=0.035$), and SHBG ($P<0.001$). For free testosterone there were significant changes following baseline, but no significant differences between BS and LM participants. There were significant differences between the groups on changes in quality of life, as assessed by the SF-36 physical component score of the SF-36 and the IWQOL-Lite (all domains and total score). There were significant changes over time on body image, depressive symptoms and relationship satisfaction, but these changes were not significantly different between groups. **Conclusions:** Both groups of men experienced significant improvements in sexual functioning and sex hormones with weight loss. The larger weight losses seen with bariatric surgery were associated with significantly greater improvements in sexual desire as well as total testosterone, LH, and SHBG. Men who underwent bariatric surgery also reported significantly greater improvements in physical functioning and weight-related quality of life. Weight loss appears to have beneficial effects on sexual health; the larger weight losses seen with bariatric surgery are associated with greater improvements in sex hormones and quality of life.

A-109-BH

RELATIONS BETWEEN DEPRESSION, EATING BEHAVIOR AND WEIGHT LOSS AFTER BARIATRIC SURGERY

Marie Pigeyre, MD,PhD¹; Pauline Camard¹; Auralie Lochon¹; Anne Pleuvret¹; Alexandre Patrice¹; Helene Verkindt¹; Robert Caiazzo, MD¹; Monique Romon, MD,PhD¹; Francois Pattou, MD,PhD¹

Lille University Hospital¹

Background: Weight loss (WL) is largely inconstant following bariatric surgery, depending on surgical procedures, lifestyle and psychological factors. Our study evaluated relations between depression, eating behavior and WL after bariatric surgery. **Methods:** We followed during 5 years, 454 subjects, who underwent gastric banding (GB) (60.4%) or gastric bypass (GBP) (39.6%) from 1996 to 2006. WL, eating behavior via the DEBQ (Dutch Eating Behavior Questionnaire) and depression via the Beck questionnaire were assessed before and 1, 2 and 5 years after surgery. **Results:** 16.9% of patients had moderate or severe depression before surgery. In women, depression score decreased more at 1 year after GBP than after GB (7.8 vs. 10.9, $p=0.007$), and then did not differ. Emotionality and externality scores decreased more at 2 years after GBP than after GB (2.0 vs. 2.3, $p=0.003$ and 2.0 vs. 2.5, $p=0.01$) and then did not differ. Restriction score increased more at 1 year after GB than after GBP (3.0 vs. 2.5, $p=0.002$) and then did not differ. There was no difference in men. In women, after GB, WL was inversely correlated with 1-year emotionality score ($r=0.325$, $p<0.0001$), and 5-years restriction score ($r=0.230$; $p=0.02$); after GBP, no correlation was found. In men, after GB, WL was inversely correlated with 2-years restriction score ($r=0.443$, $p=0.039$); after GBP, WL was inversely correlated with 1-year and 2-years restriction score ($r=0.294$, $p=0.045$ and $r=0.435$, $p=0.021$). **Conclusions:** Depression changed favorably after bariatric surgery. Eating behavior scores evolved differently with gender and surgical procedures and were correlated with WL.

A-110-BH

TWO YEAR FOLLOW-UP OF THE COMPARATIVE EFFECTS OF ROUX-EN-Y GASTRIC BYPASS, SLEEVE GASTRECTOMY, AND THE ADJUSTABLE GASTRIC BAND ON QUALITY OF LIFE

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Florida Hospital Celebration Health¹

Background: Comparative studies of the effects of Roux-en-Y gastric bypass (RYGB), sleeve gastrectomy (SG), and the adjustable gastric band (AGB) on quality of life (QoL) are lacking. In the present study, we report on the findings of a 2-year

prospective study designed to compare the effects of surgical procedures on QoL. **Methods:** The population included 104 bariatric patients, i.e. 37 Roux-en-Y gastric bypass (RYGB), 30 sleeve gastrectomy (SG), 37 adjustable gastric band (AGB), along with an age-matched group of lean controls (LC). Participants, preoperatively and at 1 year and 2 years post-surgery, completed the Impact of Weight on Quality of Life (IWQOL) questionnaire which consist of 8 QoL domains related to health, social/interpersonal relationships, mobility, work, self-esteem, sex, activities of daily living, and eating. **Results:** Preoperatively, there were no significant differences between surgical procedures for scores on the IWQOL, BMI, age, or gender. Average scores for the 8 domains of the IWQOL questionnaire for the bariatric patients were significantly ($p < 0.001$) below those of the lean controls. Total % BMI significantly declined by 27.7% at year 1 and 28.7% at year 2, and changes in BMI at both postoperative periods were nearly 2-fold greater for the RYGB and SG than for the AGB. All 8 domains of the IWQOL significantly ($p < 0.0001$) improved at year 1 postoperative, with further improvement in health, social/interpersonal relationships and activities of daily living at year 2. Improvements in IWQOL at postoperative year 1 for mobility, sex, activities of daily living, and health and, at year 2, for mobility, sex, activities of daily living and self-esteem were significantly greater for the RNY and/or SG than for the AGB. The greater improvements of the IWQOL domains for the RNY and SG, as compared to the AGB, occurred, at least, in part, from the greater weight loss of the RNY and SG procedures. **Conclusions:** Bariatric surgery leads to highly significantly improvement in quality of life one and two years after surgery. In association with weight loss, such improvements are generally greater for the RYGB and SG than for the AGB.

A-111-BH

FEASIBILITY OF ECOLOGICAL MOMENTARY ASSESSMENT TO CHARACTERIZE ADOLESCENT POSTOPERATIVE DIET AND ACTIVITY PATTERNS FOLLOWING WEIGHT LOSS SURGERY

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LD¹; Avani C Modi, PhD¹

Cincinnati Children's Hospital Medical Center¹

Background: Adherence to postoperative eating and physical activity recommendations may be important in determining sustained weight loss or weight maintenance following weight loss surgery (WLS). The limited literature on this topic, focusing primarily on adults, reveals poor adherence to at least one postoperative recommendation, with insufficient physical activity and snacking predominating. Adherence may be particularly concerning among adolescent WLS patients given adherence rates among pediatric populations generally recognized to be below 50%. Objectively assessing adherence using ecological momentary assessment (EMA) methodology has been recommended for use with WLS patients. To date, no studies have been conducted among adolescent WLS patients.

Methods: The present study is a single-site ancillary study executed within the multi-site prospective observational Teen Longitudinal Assessment of Bariatric Surgery (Teen-LABS) Consortium. Teen-LABS participants and their caregivers provided assent/consent at their 12-month research visit. Three Daily Phone Diaries (DPDs) (two weekdays, one weekend) were scheduled within 4-6 weeks following 12-month clinic visit and at 18 months (+/- one month) post WLS. The DPD is a cued recall procedure that tracks individuals through their activities over the previous 24-hours. For activities lasting 5+ minutes, adolescents reported the type of activity they engaged in and duration of the activity. **Results:** Eight of thirteen (62%) eligible participants consented to participate. The sample was 75% female and 75% Caucasian (25% Black). Mean age of participants was 18.4 ± 1.8 years (range 14.8-19.7). Participants underwent Roux en Y gastric bypass (RYGB, $n=7$) or sleeve gastrectomy ($n=1$) 12 months prior to study enrollment. Forty-five of forty-eight DPD calls were completed. Participants ate 2.4 ± 1.0 meals/snacks on weekdays and 2.5 ± 1.1 meals/snacks on weekends. Adherence to the recommendation to consume >3 meals/snacks per day was met by 2 participants on weekdays and 3 participants on weekends. Average duration of meals/snacks was 28.1 ± 21.2 minutes/weekdays and 28.0 ± 21.9 minutes/weekends. Eating episodes lasting < 20 minutes were similar on weekdays and weekends (38% and 35%, respectively). Participants ate within 1 hour of waking more frequently on weekends (10/ 15 days) than on weekdays (14/ 30 days). Seventy-five percent of participants adhered to the recommendation to eat > 1 hour before lying down. Participants engaged in >30 minutes of Active

Recreation on 12/ 45 days (27%) with no difference between weekends and weekdays. Average duration of Active Recreation on those days was 77.1±50.6 minutes (range 30-180 minutes). Three participants achieved recommended level of activity (> 30 minutes/day) when averaged over time.

Conclusions: This study contributes to the emerging literature by providing new insights into the activity patterns and adherence behaviors of adolescent WLS patients during the second postoperative year. Results support the feasibility of using DPD as an informative methodology within this population. Preliminary data reveal few adolescents met postoperative physical activity and dietary recommendations. Although not surprising given the general pediatric adherence literature, these results still warrant concern. Targeting non-adherence is essential in not only improving health outcomes but in deciphering the true potential effectiveness of WLS in this at-risk population.

A-112-BH

ADVANCES IN BEHAVIORAL WEIGHT-CONTROL TECHNOLOGY: IMPLICATIONS FOR ADJUNCTIVE BEHAVIORAL INTERVENTIONS IN THE BARIATRIC SURGERY POPULATION

Graham Thomas, PhD; Dale S Bond, PhD; David B Sarwer, PhD

Background: Our group recently published a review on the use of technology for behavioral assessment and intervention with bariatric surgery patients. The purpose of this presentation is to discuss advances in Internet and mobile health (mHealth) technology that allow for increasingly sophisticated behavioral interventions to facilitate weight loss and maintenance. These technology-based interventions may decrease cost by reducing the need for in-person provider contact, and increase efficacy by providing tailored treatment in patient's natural environment at almost any time. Commercially available weight-control tools are highly popular, but most are not tailored for bariatric surgery patients and may have limited efficacy because they do not incorporate empirically validated weight control strategies. Thus, it is important to consider how the available tools can be applied as adjunctive interventions in the bariatric population, and what additional research is needed to

tailor these tools for the bariatric population.

Methods: "Live SMART" is a large ongoing randomized controlled aimed at producing at least as much weight loss via a tailored semi-automated smartphone-based treatment as traditional group-based treatment. The smartphone-based intervention combines a commercially available application for self-monitoring with an application developed by the researchers to teach healthy eating and activity skills via 144 brief videos streamed to the phone, real-time interventionist feedback, and peer support.

"Experience Success" is a study aimed at developing and testing Web-based virtual reality (VR) technology to teach and build confidence with behavioral weight controls skills. The first VR scenario, focused on skills for eating in social situations, has been developed and pilot-tested (n=40). "B-Mobile" is a smartphone application aimed at reducing sedentary behavior in bariatric surgery patients. The smartphone's onboard accelerometer monitors time spent sitting in real-time, and participants are prompted to take brief activity breaks after 30, 60, or 120 minutes. The application provides engaging graphical feedback to encourage compliance. **Results:** A pilot test of the "Live SMART" intervention produced a weight loss of 11% (SE 1%) of initial body weight at 24 weeks.

Adherence to the self-monitoring protocol was 91% (SE 3%) during the first 12 weeks and 85% (SE 4%) during the second 12 weeks. Participants gave maximum ratings for treatment satisfaction.

"Experience Success" produced improvements in knowledge and commitment for using behavioral skills to control eating in social situations. Participants gave high ratings for the realism of the VR scenario, and indicated that it mimicked real-world situations that they have experienced. "B-Mobile" is in testing; preliminary results will be presented at the meeting.

Conclusions: A variety of novel approaches that capitalize on Internet and mHealth technology allow for powerful intervention on eating and physical activity behaviors with reduced need for in-person provider contact. These technologies may facilitate adherence to healthy eating and physical activity behaviors needed to maximize weight loss following bariatric surgery. Technology may also provide new ways of teaching these strategies to maximize knowledge and commitment for use. Despite the promise of these new technologies, caution must be exercised when recommending new weight control technologies to bariatric patients as research shows that many of them lack empirical support, and they may need to be tailored for the special requirements of bariatric surgery patients.

Tuesday, November 12, 2013

1:30 pm – 5:30 pm EST

Behavioral Health Papers

A-113-BH

PROJECT HELP: A 5 WEEK BEHAVIORAL INTERVENTION TO REDUCE EXCESSIVE VOMITING AND GASTROINTESTINAL COMPLICATIONS IN POST-OPERATIVE LAP-BAND PATIENTS

Susan M Himes, PhD¹; Sivamainthan Vithiananthan, MD²; Rena R Wing, PhD²; Tricia M Leahey, PhD²

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Brown Medical School/Miriam Hospital²*

Background: Many patients experience gastrointestinal (GI) complications after bariatric surgery. One of the most common complications is vomiting. Excessive vomiting is associated with several negative outcomes, including esophagitis, nutritional deficiencies, fatigue, and general disruption in functioning. There is also emerging evidence that excessive vomiting may be linked to esophageal cancer in post-operative bariatric surgery patients. The primary aim of this ongoing study is to test a five week behavioral intervention to reduce vomiting and GI complications in post-operative Lap-Band patients by targeting key eating behaviors associated with vomiting: excessive portion size, eating too quickly, and insufficient chewing. **Methods:** (NCT2030-09) Thus far, 5 patients (100% female, 80% White, 47.2 \pm 9.0 years of age, 35.3 \pm 6.4 kg/m², 2-12 months post-surgery) have been recruited and randomized (3:1 randomization scheme) to either the behavioral intervention (BI; N=4) or no treatment control (C; N=1). At both baseline and post-treatment participants completed a structured interview to assess frequency of vomiting and the Gastrointestinal Symptom Rating Scale (0=no GI discomfort; 6=very severe GI discomfort). Results were analyzed using descriptive statistics. **Results:** Retention from pre- to post-treatment was 100%. Preliminary results suggest

that BI reduced the frequency of vomiting by 90%; prior to treatment BI patients were vomiting an average of 4.5 \pm 1.1 times per week whereas after treatment participants were vomiting only 0.5 \pm 0.6 times per week. In contrast, weekly vomiting decreased by only 13%, or 1 episode per week, in the control participant (Pre: 8 episodes/week; Post: 7 episodes/week). BI participants also experienced a greater decline in GI discomfort (BI: -1.7 \pm 0.8; C: -0.2). Moreover, from pre- to post-treatment, BI participants lost an average of 2.1 \pm 1.9kg, whereas the participant in the control condition lost an average of only 1.0-kg. **Conclusions:** These preliminary results suggest that a five week eating behavior intervention focused on portion control, rate of consumption, and proper chewing decreases vomiting and gastrointestinal complications in post-operative Lap-Band patients. Since recurrent vomiting is implicated with Band slips, a multidisciplinary approach would benefit patient food compliance, and potentially lower Band related complications. This intervention may also improve weight outcomes. If additional data continue to show promise, the Project HELP program may have the potential to reduce negative health consequences of post-surgical complications (e.g. esophagitis) and decrease rates of emergency room visits, hospitalizations, and conversions to gastric bypass surgery.

A-114-BH

IMPACT OF BEHAVIOR THERAPY ON OUTCOMES AFTER BARIATRIC SURGERY: A PILOT STUDY

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Mayo Clinic¹

Background: About 30% of patients fail to lose adequate weight or regain weight after anatomically correct bariatric surgery. Some have proposed that psychiatric co-morbidities or a lack of skills for behavior change contribute to weight regain. Evidence supporting the benefit of pre-surgical weight loss is limited. Our aim was to evaluate the impact of participation in a pre-surgical 12-week behavior therapy program on percent weight loss (%WL), psychosocial functioning, and resolution of medical

comorbidities at 6 months after Roux-en-Y gastric bypass (RYGB). We hypothesized that participation in the behavior therapy program would increase weight loss and improve psychosocial functioning after surgery. **Methods:** Participants were recruited from all patients undergoing pre-surgical psychological evaluation for bariatric surgery and randomized to a 12-week program of behavioral weight management (treatment) or treatment as usual (control). Inclusion criteria were: BMI between 40 and 60, age 25 to 65, and seeking RYGB procedure. Patients with previous bariatric surgery or schizophrenia, bipolar disorder, or borderline personality disorder were excluded. Weights were measured at baseline, time of surgery, and 6-months post-surgically. Psychosocial functioning (depression, anxiety, alcohol use, distress tolerance, emotional eating, eating self-efficacy, and quality of life) and medical comorbidities (diabetes, hypertension) were assessed at baseline and 6 months post-surgically. **Results:** Thirty-four participants were randomized to behavior therapy (n=17) or control (n= 17); 74% were female and 91% Caucasian; age (x̄ ± SD) was 44 ± 8 years. Of the 34 participants, only 55% (n=19) underwent bariatric surgery (8 treatment, 11 control); 3 had procedures other than RYGB. Both groups lost weight prior to surgery: treatment -2.7 ± 2.8%, control -2.9 ± 3.2%, p = 0.87. Control group participants reported self-directed weight loss efforts prior to surgery using the behavior therapy program manual on their own (29%), meal replacements (29%), and self-directed dieting (35%). The treatment group reported trends toward a decrease in anxiety (p=0.07) and emotional overeating (p=0.08) from pre-surgery to 6 months post-surgery. At 6 months post-surgery, there were no differences in %WL (p=0.12) or resolution of diabetes (p=0.35) or hypertension (p=0.13). **Conclusions:** The sample size is small, but this study suggests that behavior therapy prior to bariatric surgery may not influence weight outcomes at 6 months after surgery for less psychologically complex patients. These patients may benefit from encouragement to engage in self-directed weight management prior to surgery. Patients with more psychological distress or emotional eating may benefit more from a pre-surgical behavioral intervention.

A-115-BH

A ROLE FOR ACCEPTANCE-BASED INTERVENTIONS TO STOP WEIGHT

REGAIN IN BARIATRIC SURGERY PATIENTS

Lauren Bradley¹; Evan Forman¹; David B Sarwer, PhD²; Meghan L. Butryn, PhD²; James D Herbert, PhD²

Drexel University¹
Center for Weight and Eating Disorders²

Background: While bariatric surgery typically results in substantial weight loss in the first 1-2 postoperative years, tens of thousands of patients each year experience sub-optimal weight losses and/or significant regain. Poor outcomes have been associated with reduced compliance to rigorous dietary recommendations. Decreased compliance may result in part from lack of psychological skills necessary to respond to the return of negative internal experiences that make weight control difficult (e.g., hunger, cravings). Thus, there is the need for the development of interventions to promote long-term success by fostering the psychological skills needed for dietary adherence. **Methods:** An intervention for individuals experiencing weight regain after bariatric surgery was developed. An acceptance-based behavioral intervention was chosen, as these approaches teach skills (e.g., distress tolerance, present-moment awareness, clarity of values, linking values to in-the-moment decision-making) that appear to be well-matched to the challenges faced postoperatively. The intervention included 10 weekly, 90-minute group sessions. An open-trial is currently being conducted to evaluate feasibility, acceptability, and preliminary effectiveness of this intervention. Weight and measures of eating-related variables were assessed and pre- and post-intervention. **Results:** An open trial of an acceptance-based behavioral group treatment for individuals who have regained at least 10% of their weight loss since surgery is currently being conducted, with the first wave (n=5) completed. This intervention was shown to be acceptable, with 100% retention and participants' mean rating of satisfaction with the program a 4.0 out of 5. Weight regain was stopped, and even reversed, with a mean weight loss of 2.09% ± 1.65% throughout the 10-week intervention. Pre to post improvement in process measures, including restraint (Ĥ-p2 = 0.43), eating in response to internal cues (Ĥ-p2 = 0.24), and intention to eat in response to a craving (Ĥ-p2 = 0.45), exhibited very large effect sizes. **Conclusions:** Together, these data provide initial support for the feasibility and acceptability of an acceptance-based intervention for the post-bariatric

surgery population. Our findings also lend support for the potential efficacy of the intervention.

Thursday, November 14, 2013
8:00 am – 10:00 am EST

Paper Session III: Sleeve Gastrectomy

**A-111-OR
COMORBIDITY RESOLUTION IN
MORBIDLY OBESE CHILDREN AND
ADOLESCENTS UNDERGOING SLEEVE
GASTRECTOMY**

Aayed R Alqahtani¹; Mohamed O Elahmedi¹
King Saud University¹

Background: The use of bariatric surgery in treating morbidly obese children and adolescents is becoming a necessity to fight the accompanying comorbidities including the risk of early-onset cardiovascular disease. Previously, we reported on the safety of performing Laparoscopic Sleeve Gastrectomy (LSG) in children and adolescents. However, no significant existing evidence to date that evaluated the effect of LSG on comorbidity resolution in this age group. This study will assess the resolution of comorbidities in 204 morbidly obese children and adolescents who underwent LSG at our institution. **Methods:** We performed a retrospective review on prospectively collected data of all morbidly obese patients below the age of 21 who underwent LSG by a single surgeon between April 2008 and February 2013. We analyzed patient demographics, anthropometric measurements and comorbidities at baseline and at each follow-up point. **Results:** The review yielded 204 patients. Mean age was 14.13 ± 4.0 years. Median preoperative BMI was 46.8 kg/m^2 . Median %Excess BMI Loss (%EBL) at 1-year was 68.8% (n=98), at 2-years it was 67.6% (n=43), and at 3 years it was 74.6% (n=10). ANOVA test demonstrated no statistically significant difference between the %EBLs at 1-, 2-, and 3-years (p-value 0.903) (Figure 1). Comorbidity data indicate that 87% of the hypertensive patients experienced complete resolution, 11% had improvement in severity, and all prehypertensive patients experienced complete resolution. With regard to patients with dyslipidemia, cure was observed in 35%, improvement in 55%, and no change was noticed in 11% of the study group. 96.1% of patients with prediabetes and diabetes were cured. Overall, LSG achieved cure or improvement of 96% of comorbidities. All children experienced normal growth velocity. There were no mortalities or significant morbidity. **Conclusions:** LSG performed on children and adolescents results in cure or improvement of 96% of comorbidities, including those associated with the development of early-onset cardiovascular disease. Additionally, it results in successful BMI loss that plateaus after one year of surgery. Moreover, growth velocity is unaffected, with safe outcomes.

A-112-OR

**LAPAROSCOPIC GREATER CURVATURE
PLICATION VS.. LAPAROSCOPIC SLEEVE
GASTRECTOMY FOR MANAGEMENT OF
MORBIDLY OBESE PATIENTS.**

Amr ElSherif, MD
Medical Research Institute-Alexandria U.

Background: Morbid obesity is one of the major health problems of the 21st century. Bariatric surgery has become the main line of treatment during the past few decades. Laparoscopic sleeve gastrectomy (LSG) has gained popularity for its effectiveness in achieving excessive weight loss and the relative easiness of the technique. Lately IGCP has emerged as a restrictive bariatric procedure that successfully reduces the gastric volume by plication of the gastric greater curvature. **Methods:** Between January 2010 and April 2012, sixty morbidly obese patients were randomly divided into two groups. Group A underwent LSG while group B underwent LGCP. Data was collected through routine follow-up. Demographics, complications, and percentage of excess weight loss (%EWL) were compared. **Results:** All procedures were completed laparoscopically. One patient in the LSG group was reoperated because of early postoperative bleeding. The mean hospital stay was 3.4 ± 2.0 days in the LGCP group and 3.2 ± 1.6 days in the LSG group (P = 0.595). One year after surgery, the mean %EWL was 48.6 ± 15.7 % (n = 30) in the LGCP group and 72.0 ± 26.8 % (n = 30) in the LSG group (P = 0.032). The comorbidities, including diabetes, sleep apnea and hypertension, were markedly improved in both groups 6 months after surgery. **Conclusions:** Compared with LSG, LGCP is inferior as a restrictive procedure for weight loss. Longer follow-up and more randomized controlled trials are needed before making final judgment.

**A-113-OR
OUTCOME OF LAPAROSCOPIC SLEEVE
GASTRECTOMY PERFORMED IN
COMBINATION WITH HIATAL HERNIA
REPAIR: SINGLE CENTER EXPERIENCE**

Maher El Chaar, MD¹; Leonardo Claros, MD, FACS, FASMBS¹; Jill Stoltzfus, PhD²; Maureen E Miletics, RN BSN MS CBN²; George C Ezeji, MD²
St Luke's University Hospital and Health Network, Department of General Surgery, Division of Minimally Invasive Surgery¹
St Luke's University Hospital and Health Network, Department of General Surgery, Division of Minimally Invasive Surgery²

Background: Laparoscopic Sleeve gastrectomy (LSG) is becoming a very popular bariatric procedure in morbidly obese patients. The incidence of Hiatal Hernia (HH) in morbidly obese patients is higher than the general population. The repair of HH during LSG is indicated, however, the type of repair remains

controversial. Also, the outcome of patients with HH following LSG is unknown. The objective of this study is to evaluate the incidence and the type of HH repair during LSG and to investigate the effect of HH repair on Gastro-Esophageal Reflux Disease (GERD) and weight loss following LSG. **Methods:** After obtaining IRB approval we performed a retrospective review of prospectively collected data on all patients who underwent a primary LSG between September 2009 and December 2012. Patients who underwent a HH repair were identified. Patients with Type I HH underwent an anterior hernia repair (LSG+HH) whereas patients with Type II, III and IV HH (Paraesophageal Hernias) underwent a formal posterior repair with or without a synthetic absorbable mesh (LSG+PEH). Patient demographics included age, gender, race, BMI and preoperative %EWL. Primary outcomes included operative time, blood loss and postoperative excess weight loss at 3,6 and 12 months. In addition, GERD Health Related Quality of Life (HRQL) questionnaire was given to all patients postoperatively. GERD (HRQL) includes 10 questions related to GERD which are scored on a scale of 0 to 5. To analyze the questions we conducted separate, mixed randomized-repeated measures of analyses of variance (ANOVA) with hernia repair as the randomized factor and time between pre and postoperative outcome as the repeated factor. **Results:** 338 patients underwent primary LSG and were included in our analysis. Among those patients 99 patients (29%) were found to have a HH. 56 patients (16%) had a Type I HH and underwent LSG in combination with anterior repair of HH (LSH+HH). However, 43 patients (13%) were found to have paraesophageal hernias and underwent LSG+PEH. Among the 43 patients who underwent LS+PEH, 22 patients underwent LS+PEH with absorbable mesh placement. Demographics and primary outcomes are shown in Tables 1 and 2. At 6 and 12 months, we found a higher %EWL in patients undergoing either LSG+HH or LSG+PEH compared to LSG performed alone. Our results also revealed a statistically significant improvement in GERD symptoms postoperatively for both hernia repair groups based on the GERD (HRQL). Also, patients who underwent LSG+HH and LSG+PEH reported a higher satisfaction rate with their postoperative condition compared to patients who underwent a LSG alone (93% vs... 87%). **Conclusions:** To our knowledge, this is the largest series of LSG performed in combination with HH repair. Patients who undergo LSG in combination with a hiatal hernia repair have improvement in GERD symptoms and report a high post-operative satisfaction rate. Also, the excess weight loss is comparable to patients undergoing LSG alone. Further studies are needed to clarify the long term outcome of patients undergoing LSG in combination with hiatal hernia repair.

A-114-OR

PREVALENCE, DIAGNOSIS, AND TREATMENT OPTIONS FOR GASTROESOPHAGEAL REFLUX DISEASE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY FOR MORBID OBESITY

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Cleveland Clinic of FL¹
CCF²

Background: Laparoscopic Sleeve Gastrectomy (LSG) has gained popularity as a primary procedure in Bariatric surgery. Gastroesophageal Reflux Disease (GERD) has been described as the most prevalent long-term complication. Limited long-term data is available in the literature on the prevalence of GERD after LSG. The aim of our study is to determine the rate of GERD after LSG, as well as the treatment modalities and outcomes in this selected group of patients. **Methods:** A retrospective review of all the patients who underwent LSG for Morbid Obesity at The Bariatric and Metabolic Institute of the Cleveland Clinic Florida between 2004 and 2012 was conducted. Symptomatic GERD identified was investigated using a standardized questionnaire. **Results:** A total of 640 LSG were reviewed. GERD was identified in 76/640 (11.87%). Fifty-five (8.6%) patients reported history GERD before undergoing LSG and 21(3.3%) patients developed new onset of GERD, 6 months after the procedure. All patients with GERD were treated medically with different doses of PPI. Fifty-eight (76.3%) patients had symptoms resolution with medical treatment alone. Ten (1.5%) patients required conversion to RYGBP. Five (50%) of the conversion patients had GERD prior to the LSG. Ninety percent (9/10) of the conversions patients demonstrated complete resolution of GERD. **Conclusions:** In our series the incidence of new onset of GERD after sleeve gastrectomy was low. The great majority of patients respond well to medical treatment. The need for conversion to RYGBP due to intractable GERD is 1.5%. Conversion to RYGBP is a safe procedure that offers complete resolution of symptoms in patients with intractable GERD.

A-115-OR IS SLEEVE GASTRECTOMY WITH JEJUNAL BYPASS AS GOOD AS ROUX-EN-Y GASTRIC BYPASS FOR THE TREATMENT OF MORBID OBESITY? A COMPARATIVE STUDY.

Matias Sepulveda¹; Munir J Alamo, MD¹; Diego Reyes¹; Cristian A Astorga, MD¹; Andrea Sepulveda, MD¹
Hospital Dipreca¹

Background: Sleeve Gastrectomy with Jejunal Bypass (SGJB) is performed in our institution since 2004 for the treatment of obese patients. This technique has shown acceptable results in terms of

weight loss and improvement of comorbidities, with acceptable morbidity as Roux-en-Y Gastric Bypass (RYGB). The main objective of this study is to compare SGJB with RYGB. **Methods:** Retrospective case series from a prospective database where two different surgical teams performed either RYGB or SGJB. All patients with a preoperative BMI >30kg/m² were included. Analysis of weight loss and comorbidities was made with descriptive statistics, t-test, and Fisher exact test depending on the variable. **Results:** 455 patients underwent SGJB and 135 RYGB. Patients were similar on age, and associated comorbidities, but differed in male/female rate, and preoperative BMI (37.9 kg/m² in SGJB versus 40.2 kg/m² in RYGB, p=0.0013). Surgical time was 124 min in SGJB and 132 in RYGB (p < 0.0001), hospital postoperative stay was 3.1 days in SGJB and 3.8 in RYGB (p = 0.1). The EWL at 5 years was 77.1% with SGJB and 63.2% with RYGB (p = 0.156). Improvement of hypertension was better in the SGJB group (91% vs... 70% p 0.008), insulin resistance did not show significant difference, but type 2 diabetes showed 86% of improvement with SGJB and 71.4% in RYGB (p = 0.011), and dyslipidemia 97% vs... 84% respectively (p=0.043). Morbidity didn't show significant difference. **Conclusions:** Despite the study limitations, we think that SGJB is at least comparable with RYGB, with a tendency of the SGJB to achieve better results in terms of excess weight loss and comorbidities resolution.

A-116-OR LAPAROSCOPIC VERTICAL SLEEVE GASTRECTOMY VS. LAPAROSCOPIC ROUX-EN-Y-GASTRIC BYPASS: SINGLE CENTER EXPERIENCE WITH 2 YEAR FOLLOW-UP

Maher El Chaar, MD¹; Leonardo Claros, MD, FACS, FASMBS¹; Jill Stoltzfus, PhD¹; Maureen E Miletics, RN BSN MS CBN¹; George C Ezeji, MD²
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St Luke's University Hospital and Health Network,
Department of General Surgery, Division of Minimally Invasive Surgery²*

Background: Laparoscopic Sleeve Gastrectomy (LSG) is a new bariatric procedure that is gaining wide acceptance. However, Laparoscopic Roux-en-Y-Gastric Bypass (LRYGB) remains the gold standard and the most commonly performed procedure in the United States. There are few studies comparing LSG and LRYGB. The aim of this study is to compare the safety and outcome of LSG versus LRYGB in a center of excellence (COE). **Methods:** All patients who underwent primary non-revisional laparoscopic bariatric surgery from September 2009 to December 2012 were analyzed. Patients who underwent gastric banding were excluded. 885 patients underwent either a LSG or LRYGB and were included in our

study. LSG were performed using a 36 French bougie. LRYGB were performed with a 25mm circular stapler. Demographics included age, gender, race and preoperative BMI. Primary outcomes were Length of Stay (LOS), 30-day mortality, serious complication, reoperation and readmission rates and also % Excess Weight loss (%EWL) at 3,6,12 and 24 months. Secondary outcomes were operative time and blood loss. **Results:** Among the 885 patients, 547 (62%) underwent LRYGB and 338 (38%) underwent LSG. Our results are shown in tables 1 and 2. We had no mortality in our series. LOS was 29.1 and 31 hrs. for LSG and LRYGB respectively (P>0.05). LSG patients had a lower 30-day complication and reoperation rates compared to LRYGB but the difference was not statistically significant. LRYGB had a significantly higher readmission rate compared to LSG (5.1% vs... 0.3% P< 0.05). LSG had a significantly lower %EWL during our follow-up period. In addition, LSG patients had a shorter operative time (80.2 min vs... 104.6 min, P<0.05) but no difference in operative blood loss. **Conclusions:** LSG seems to have a better safety profile in the short term compared to LRYGB with a significantly lower readmission rate. However, LRYGB patients achieve a significantly higher EWL compared to LSG patients. Randomized clinical trials are needed to better elucidate our findings.

A-117-OR SHORT-TERM OUTCOMES OF LAPAROSCOPIC VERTICAL SLEEVE GASTRECTOMY AND GASTRIC BYPASS IN THE ELDERLY; A NSQIP ANALYSIS

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Dartmouth-Hitchcock Medical Center¹

Background: Outcomes of bariatric surgery in the general population are well established, especially for laparoscopic gastric bypass (GBP). Even though the US population is aging, and vertical sleeve gastrectomy (VS..G) is being performed more frequently, data on the safety of VS..G performed in elderly patients are sparse. This study aims to assess the short-term outcomes associated with laparoscopic VS..G in patients aged 65 years and over, in comparison to GBP. **Methods:** The NSQIP database was queried for all patients aged 65 and over, who underwent elective laparoscopic GBP and VS..G between 2005 and 2011. Chi-square, Fisher's exact and two-tailed Student's t-test were used to compare baseline characteristics and outcomes. Binary logistic regression was used to identify independent predictors of 30-day morbidity and mortality. Odds ratios (OR) with 95% confidence interval (CI) were reported when applicable. **Results:** We identified 1946 patients. Mean BMI was 44.8±8. VS..G was performed in 155 patients (8%). Classification of ASA 3 or 4 was given to 1702 patients (87.5%). There were no statistically significant differences in the

presence of cardiac, pulmonary, hepatic or renal comorbidities between patients who underwent VS..G and GBP; ASA classification of 3 or 4 was similar between the two groups (82.6% vs.. 87.9%, p=0.056). Diabetes was more frequent in the GBP group (43.2% vs.. 53.7%, p=0.013), and vascular comorbidities were more frequent in the VS..G group (21.8% vs.. 8.1%, p<0.001). 30-day mortality (0.6% vs.. 0.7%, OR 0.89, 95% CI 0.12-6.83), serious (5.2% vs.. 4.7%, OR 1.09, 95% CI 0.52-2.3) and overall morbidity (9% vs.. 8.2%, OR 1.12, 95% CI 0.63-1.99) were similar. There was no significant difference in the rate of septic occurrences (1.3% vs.. 1.8%, p=1.0), bleeding (2.6% vs.. 1.3%, p=0.267), intra-abdominal abscess (0% vs.. 0.9%, p=0.632), pulmonary embolism (1.3% vs.. 0.6%, p=0.278) or re-operation (3.2% vs.. 3.5%, p=0.849) between VS..G and GBP patients.

Conclusions: In elderly patients undergoing laparoscopic bariatric surgery, VS..G is not associated with significantly different 30-day outcomes compared to GBP. Both procedures are followed by acceptably low morbidity and mortality. For patients aged 65 years and over considering bariatric surgery, laparoscopic VS..G and GBP appear to be equally safe.

A-118-OR REMISSION OF OBSTRUCTIVE SLEEP APNEA FOLLOWING BARIATRIC SURGERY

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*Henry Ford Health System*⁵
*St. John Hospital Medical Center*⁶
*Oakwood Hospital*⁷
*Beaumont Hospital*⁸
*Barix Clinics*⁹

Background: Evidence on remission of obstructive sleep apnea (OSA) following bariatric surgery and its relation to weight loss is conflicting. We sought to identify factors associated with successful OSA remission in a large, population-based study of bariatric surgery patients. **Methods:** We analyzed data from the statewide, prospective clinical registry of the Michigan Bariatric Surgery Collaborative and identified 3,550 patients with OSA (using CPAP or BiPAP) who underwent a primary bariatric procedure between June 2006 and October 2011 and had at least 1 year of follow up data. We used multivariable logistic regression to identify pre-operative factors associated with successful OSA remission, which we defined as discontinuation of CPAP/BiPAP at 1 year. Our regression model also included weight loss at 1

year, divided into equal quintiles, and procedure type as covariates. **Results:** The overall OSA remission rate was 60.3%. On multivariable analysis, the odds ratio of OSA remission increased stepwise through quintiles of 1-year weight loss. Relative to the lowest quintile, the odds ratios of remission in the 2nd through 5th quintiles were 1.44 (CI 1.05-1.97), 2.03 (CI 1.44-2.85), 2.47 (1.65-3.68) and 3.53 (CI 2.56-4.88). Relative to gastric banding, the adjusted odds of OSA remission were greater with gastric bypass (OR 2.38, CI 1.83-3.10), sleeve gastrectomy (OR 2.01, CI 1.52-2.65) and duodenal switch (OR 2.57, CI 1.42-4.66). Additional negative independent predictors of remission included increasing age category (per 10 years) (OR 0.73, CI 0.68-0.78), increasing BMI category (per 10 units) (OR 0.57, CI 0.53-0.62), male gender (OR 0.58 CI 0.51-0.67), hypertension (OR 0.83, CI 0.72-0.95), depression (OR 0.78, CI 0.68-0.89), and pulmonary disease (OR 0.88, CI 0.79-0.98). An increasing (better) score on the baseline Health and Activities Limitations Index survey was a positive independent predictor (OR 1.70, CI 1.29-2.22). **Conclusions:** Weight loss is an important predictor of OSA remission following bariatric surgery. However, independent of weight loss, there remain significant differences in the likelihood of remission between gastric banding and other bariatric procedures. This suggests that there may be a metabolic, weight-independent effect of procedure type on OSA remission.

Thursday, November 14, 2013
1:00 pm – 2:30 pm EST

Paper Session IV: Co-Morbid Conditions

A-119-OR CHANGES IN SEXUAL FUNCTIONING AND SEX HORMONES IN WOMEN WHO UNDERGO BARIATRIC SURGERY

David B Sarwer, PhD¹; Jacqueline C Spitzer, MS Ed¹;
Thomas A Wadden, PhD¹; Raymond C Rosen, PhD²;
Kathy Lancaster, BA³; Anita P Courcoulas, MD MPH⁴;
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This paper has been moved to the JAMA Session;
Friday, 11/15, 5:15 pm – 6:15 pm

A-120-OR COMPREHENSIVE EVALUATION OF THE EFFECT OF BARIATRIC SURGERY ON PELVIC FLOOR DISORDERS

Hector Romero Talamas, MD¹; Ali Aminian, MD¹;
Esam S Batayyah, MD¹; Andrea Zelisko, MD¹; Cecile
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Background: The association of pelvic floor disorders (PFD) with obesity is a well-documented phenomenon. The spectrum of PFD includes stress urinary incontinence (SUI), urge urinary incontinence (UUI), pelvic organ prolapse (POP), and anal incontinence (AI). Resolution or improvement of SUI after bariatric surgery has been previously reported. However, the data addressing the effect of surgically induced weight loss over UUI and other forms of PFD is sparse. Moreover, comprehensive clinical evaluation including gynecological examination and urodynamic testing has not been performed. The aim of our study was to evaluate the effect of bariatric surgery on PFD in morbidly obese women. **Methods:** From December 2008 to December 2012, morbidly obese women that were deemed as candidates for bariatric surgery at a Bariatric Center of Excellence were asked to complete a PFD-specific screening questionnaire. Patients who resulted positive were asked to participate in the study by completing 3 validated condition-specific questionnaires before surgery and at 6-12 months after the bariatric procedure. Participants that consented for diagnostic evaluation were additionally referred for gynecological clinical examination (Pelvic Organ Prolapse

Quantification (POP-Q) test) and urodynamic testing at similar time-points. In total, 72 patients completed their post-operative questionnaires, 19 physical examination, and 13 urodynamic test. **Results:** Seventy two patients, with mean age of 48.8±10.5 years, underwent laparoscopic gastric bypass (n=65), sleeve gastrectomy (n=5), and gastric banding (n=2). Mean BMI dropped from 47.5±9.4 to 32.7±8.1 kg/m² at 1-year after surgery (p<0.001). Based on subjective data, the most prevalent PFD was SUI, identified in 60 (83.3%) patients at baseline and subsequently in 32 (44.4%, P<0.001) at follow-up. Decrease in prevalence of SUI after surgery was also confirmed with urodynamic testing (from 76.9% to 30.8%, p=0.01). The prevalence of UUI and AI at baseline and follow-up were 75% vs... 37.5% (p<0.001) and 29.2% vs... 25% (p=0.58), respectively. There was no significant change in prevalence and bother of POP based on subjective data and POP-Q test. The preoperative score for presence and bother of PFD-related symptoms, as assessed by the Pelvic Floor Distress Inventory (PFDI-20) decreased from 76.7±47.2 to 52.2±50.9 at follow-up (P<0.001). Improvement in quality of life and sexual function was observed with a significant change in the scores of the Pelvic Floor Incontinence Questionnaire (PFIQ-7) and the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12) from 30.3±39.2 to 16.8±36.9 (P=0.002) and from 34.2±5.1 to 36.0±6.0 (P=0.028), respectively. **Conclusions:** Surgically induced weight loss is associated with a decrease in prevalence and severity of diverse forms of urinary incontinence as well as improvement in quality of life and sexual function of morbidly obese women.

A-121-OR PREVALENCE OF ENDOMETRIAL PATHOLOGY IN OBESE WOMEN UNDERGOING BARIATRIC SURGERY AND CHANGES IN INFLAMMATORY MARKERS OCCURRING WITH WEIGHT LOSS

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University of Pittsburgh²
University of Minnesota³

Background: Introduction: Endometrial cancer morbidity and mortality are rising with increasing obesity rates in the US and around the world. We sought to determine the prevalence of occult endometrial hyperplasia in women undergoing bariatric surgery at two sites (University of Pittsburgh (UP) and University of Minnesota (UM)), and to assess in the impact of weight loss on the expression patterns of biomarkers associated with cancer and inflammation including: estrogen receptor (ER), CD3, CD20, and Ki-67 in the endometrium. **Methods:**

Methods: Endometrial samples were obtained from morbidly obese women at the time of bariatric surgery and one year later. Both investigators and pathologists were blinded to the status of patients until the conclusion of the study. All endometrial biopsies from University of Minnesota were subjected to immunohistochemical stains for ER, CD3, CD20, and Ki-67 using standard protocols. **Results:** Results: 84 women (59 at UM and 25 at UP) were enrolled and underwent an initial biopsy. The mean (range) age was 42 year (22-62) and the mean (range) weight and BMI prior to surgery was 127 kg (87-176) and 46.8 kg/m² (36-64.3) respectively. Abnormal endometrial findings (four simple, one complex hyperplasia without atypia, and one complex hyperplasia with atypia) were seen in 7.1% of patients presenting for bariatric surgery (6/84)). In three cases hyperplasia resolved without treatment following weight loss and one hyperplasia resolved with hormonal treatment, paralleled with decreasing level of ER. Statistically significant differences were observed between matched pre- and post-surgery levels of CD20 positive inflammatory cells based on an exact McNemar test (p=0.0196). Tendency towards decreases expression level from baseline status were observed for Ki67 (p<0.0001), and CD3 positive inflammatory cells (p <0.0504).

Conclusions: Conclusions: Women who present for bariatric surgery are at relatively high risk of harboring unrecognized endometrial pathology and this risk appears to be at least partially mitigated by weight loss. Our data demonstrate that the reduction of risk is associated with reduced expression of multiple markers that have been implicated in malignant transformation and inflammation suggesting that these pathways may be relevant and targetable in the prevention or treatment of endometrial cancer

A-122-OR THE EFFECT OF BARIATRIC SURGERY ON GOUT: A CASE-CONTROL STUDY

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Cleveland Clinic Foundation¹

Background: Obesity is a well-recognized risk factor for the development of gout. An increased incidence of acute gouty attacks after a surgical procedure has been reported. However, the data addressing this issue after bariatric procedures is sparse. Moreover, the effect of weight loss surgery beyond the acute postoperative phase remains unclear. We conducted a retrospective case-control study to evaluate the pre and post-surgical frequency and features of gouty attacks in morbidly obese patients after bariatric surgery. **Methods:** Between 01/04 and 02/13, a total of 99 morbidly obese patients (2.6% of all patients) that underwent bariatric surgery were identified to

have gout. Demographical variables and gout-related parameters including number of pre- and post-surgical gouty attacks, type of medications and dosage, and uric acid levels were retrospectively identified and recorded. The control group consisted of 56 obese individuals with active gout that were submitted to non-bariatric upper abdominal procedures (laparoscopic cholecystectomy in 79%) at our institution. **Results:** The bariatric group had a female to male to ratio of 1:3, mean age of 52.1±10.3 years, and mean BMI of 49.5±11.9 kg/m². Bariatric procedures included Roux-en-Y gastric bypass (n=69), sleeve gastrectomy (n=22), and adjustable gastric banding (n=8). Baseline characteristics and prophylaxis use at the time of surgery were not statistically different between bariatric and control groups. However, bariatric patients were, on average, 6.2 years younger (p<0.001) and 7.2 kg/m² heavier (p<0.001). Reduction of BMI at 1- and 12-months after bariatric surgery was 4.4±3.1 and 11.0±6.2 kg/m², respectively. The incidence of acute gouty attack in the first month following surgery was significantly higher in the bariatric group than control group (17.5% versus 1.8%, p=0.003). In the bariatric group, 23.8% of patients had at least one gouty attack during a 12-month period before surgery which decreased to 8.0% during postoperative months 1 to 13 (p=0.005). In addition, there was a significant reduction in level of uric acid 12 months after bariatric surgery when compared to baseline values (9.1±2.0 versus 5.6±2.5 mg/dl, p=0.007). **Conclusions:** Acute gouty attacks occur frequently after bariatric surgery. The frequency of acute episodes in this bariatric surgery cohort is significantly higher compared to an obese cohort undergoing non-bariatric abdominal surgery. However, the incidence decreases significantly after the first postoperative month to 1 year. Intensive pre-surgical treatment and aggressive prophylaxis should be considered in patients with preoperative diagnosis of gout scheduled for a bariatric procedure.

A-123-OR IMPROVEMENTS IN ALBUMINURIA AND GLOMERULAR FILTRATION RATE AFTER BARIATRIC SURGERY

Tirissa Reid¹; Saqib Saeed, MD²; Shiranda McCoy, PA²; Adebola A Osewa, FNP-BC²; Amrita Persaud, MS, MEd, RD, CDN²; Monqidh Al-Sawwaf, MD²; Leaque Ahmed, MD²
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Background: Albuminuria and impaired glomerular filtration rates (GFR) have both been independently associated with increased risk of all-cause mortality, so finding therapies which improve either condition is beneficial. We previously reported on a group of 38 non-diabetic bariatric patients who underwent Roux-en-Y gastric bypass (RYGB) and subsequent improvements in albuminuria occurring early in the

post-operative period, 3-12 months post-op. We sought to confirm those results in a larger cohort of patients undergoing RYGB or sleeve gastrectomy (SG), including patients with diabetes (DM) and hypertension (HTN), with pre-operative normal urinary albumin levels or microalbuminuria, [urinary albumin creatinine ratio (UACR) of 30-299 mg/g]. **Methods:** Retrospective study of 159 patients who underwent bariatric surgery at a New York City public hospital from 2004-2012. Inclusion criteria: patients with pre-operative and 1 yr. post-operative values for UACR, serum creatinine and weight (kg). Exclusion criteria: patients with pre-op CKD Stage 3 or macroalbuminuria (UACR 300 mg/g). The primary outcome measures were changes in UACR and GFR at 1 year. Data were obtained from electronic medical records and expressed as mean $\hat{A}\pm$ SE. Differences were analyzed using paired Student's t-tests and Pearson's correlation coefficients and $p < 0.05$ considered statistically significant. **Results:** 159 patients met inclusion criteria; 92% female; mean age 40.9 $\hat{A}\pm$ 0.89 yrs. (range 18-65); 83.6% white Hispanic, 15.1% African-American; 75.4% had RYGB, 24.6% SG. Pre-op, hypertension and DM were present in 28.3 and 42.8% of patients, respectively. Pre-op mean UACR was 21.4 $\hat{A}\pm$ 3.1 mg/g. Microalbuminuria was present in 13.8% pre-op (45% of these had hypertension, 27% had diabetes). Mean UACR decreased significantly comparing pre-op vs... post-op for the entire group, 21.4 $\hat{A}\pm$ 3.1 vs... 10.1 $\hat{A}\pm$ 1.2 mg/g ($p < 0.0001$), diabetics, 18.8 $\hat{A}\pm$ 4.3 vs... 9.6 $\hat{A}\pm$ 1.6 mg/g ($p = 0.04$) and hypertensives, 28.5 $\hat{A}\pm$ 6.7 vs... 12.3 $\hat{A}\pm$ 2.5 mg/g ($p = 0.004$). Of 22 patients with pre-op microalbuminuria, 18 (82%) had resolution at 1 year. At 1 year, there was a significant difference in UACR based on type of surgery, 11.6 $\hat{A}\pm$ 1.6 mg/g after RYGB vs... 6.03 $\hat{A}\pm$ 0.6 mg/g after SG. Changes in UACR did not correlate with changes in weight ($p = 0.15$). Patients with and without diabetes showed GFR improvement: pre vs... 1 yr. post-op, in diabetics 88.9 $\hat{A}\pm$ 3.8 vs... 79.1 $\hat{A}\pm$ 2.9 ml/min ($p = 0.0005$), non-diabetics 101.5 $\hat{A}\pm$ 2.7 vs... 90.9 $\hat{A}\pm$ 2.6 ml/min ($p < 0.0001$). Changes in GFR correlated with changes in weight in non-diabetics ($p = 0.017$, $r = 0.23$), but not in diabetics. **Conclusions:** UACR improved significantly at 1 year post-op and this change did not correlate with weight changes. The most significant improvements in UACR occurred in patients with HTN and SG patients. Most patients with pre-op microalbuminuria experienced resolution by 1 yr. post-op. GFR improved in both diabetics and non-diabetics, with the change in non-diabetics being independent of weight changes. This study is limited by its retrospective nature. Given the increased mortality associated with albuminuria and impaired GFR, particularly in diabetics, prospective studies should evaluate whether improvements post-bariatric surgery translate into improved all-cause mortality rates, independent of weight changes.

A-124-OR

RESOLUTION OF NON-ALCOHOLIC FATTY LIVER DISEASE AND METABOLIC SYNDROME IN ADOLESCENTS UNDERGOING LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB)

John Loy, MD¹; Heekoung A Youn, RN; Bradley F Schwack, MD; Marina Kurian, MD; Christine J Ren-Fielding, MD; George A Fielding, MD
NYU Langone Medical Center¹

Background: The associations between obesity, non-alcoholic fatty liver disease (NAFLD) and metabolic syndrome (MS) are well recognized. NAFLD is the most common cause of chronic liver disease in adolescents and it is likely that NAFLD cirrhosis will become the most frequent indication for liver transplantation in the developed world. NAFLD is also increasingly accepted as the hepatic manifestation of MS. Obese adolescents are at greatly increased risk of developing NAFLD which may progress to cirrhosis if left unchecked. We sought to assess the effect of bariatric surgery on adolescents with evidence of NAFLD at presentation. **Methods:** Adolescents undergoing Laparoscopic Adjustable Gastric Banding (LAGB) with abnormal liver sonograms or deranged liver function tests at presentation were scored for NAFLD severity using a previously validated NAFLD scoring system. They were also assessed against the International Diabetes Federation (IDF) MS criteria. NAFLD fibrosis scores were calculated pre-operatively and at 1 and 2 years post-operatively. MS criteria were assessed at the same time intervals. Other data recorded included weight, body mass index (BMI), complications, percentage excess weight loss (%EWL), metabolic and lipid panels and body fat composition using body composition scanning. **Results:** 56 adolescents, 39 female and 17 male, mean age 16.1 years (14-17.8yr.s) with evidence of fatty liver disease on presentation underwent LAGB for treatment of morbid obesity. Mean pre-operative weight was 304.3lbs (+/-60.8) and BMI was 48.8 kg/m² (+/-7.0). There was no mortality and one patient was re-admitted with acute appendicitis within 30 days. Follow up rates were 54/56 (96%) at 1 year and 49/51 (96%) at 2 years. NAFLD fibrosis scores improved significantly by 0.68 (+/-1.03, $p < 0.0001$) at 1 year and by 0.38 (+/-0.99, $p = 0.0096$) at 2 years post-operatively on paired t-testing. Fifteen of 18 (83.3%) patients who met IDF metabolic syndrome criteria had complete resolution within 2 years of surgery. Mean %EWL was 48.96% (+/-22.1) at 2 years. There were 3 (5.4%) band slips and 2 (3.57%) port problems requiring re-operation giving a re-operation rate of 8.9% for band related complications at 2 years. There was no mortality or complications from these re-operations. **Conclusions:** LAGB is a safe and effective treatment for obese adolescents with evidence of metabolic syndrome and fatty liver. LAGB significantly improved NAFLD fibrosis scores within 1 year and resolved metabolic syndrome in 83% of adolescents within 2

years of surgery. The improvement in NAFLD scores which occurred following LAGB demonstrates its value as a metabolic operation in the adolescent population.

Thursday, November 14, 2013
1:00 pm – 2:30 pm EST

**Paper Session V: Perioperative Outcomes
and Patient Safety**

A-125-OR
**A DECADE ANALYSIS OF TRENDS AND
OUTCOMES OF BARIATRIC SURGERY IN
MEDICARE BENEFICIARIES**

Mehraneh D Jafari, MD¹; Monica T Young, MD¹; Brian Smith, MD¹; Michael J Phalen, PhD¹; Ninh T Nguyen, MD¹
University of California, Irvine¹

Background: In 2006, centers for Medicare and Medicaid services issued a national coverage determination (NCD) that restricted bariatric procedures to be performed at centers of excellence. We aimed to analyze the trends and outcomes of bariatric surgery in Medicare patients and to specifically analyze outcomes after implementation of the NCD. **Methods:** Using the Nationwide Inpatient Sample, a review of elective admission of morbidly obese patients who underwent bariatric surgery (gastric bypass, sleeve gastrectomy, gastric band) was conducted between 2001-2010 for Medicare patients. Patient demographics, comorbidities, serious postoperative morbidity, and in-hospital mortality were reviewed. Yearly trends for length of stay, serious morbidity, and in-hospital mortality were analyzed in Medicare compared to non-Medicare patients.

Results: There were 775,516 cases sampled with Medicare beneficiaries consisting of 16% of cases (n=125,378). The mean age was 46 years old with 80% females. The most commonly performed operation was Roux-en-Y gastric bypass (79% of cases); gastric band was performed in 19% of cases, with a peak rate in 2008 at 33%; and sleeve gastrectomy was performed in <2% of cases. Since 2001, there was an overall trend towards improved outcomes with a decrease in mortality at a mean rate of 23% per year and a reduction in serious morbidity at a mean rate of 29% per year. In the Medicare patients, in-hospital mortality rate prior to the NCD was 0.44% which decreased to 0.23% post-NCD. For non-Medicare patients, the in-hospital mortality prior to the NCD was 0.18% which decreased to 0.07% post-NCD. However, this difference of in-hospital mortality in Medicare beneficiaries before vs... after NCD (0.21%) was higher than the difference observed in the non-Medicare patients (0.11%).

Conclusions: The overall rate of complications and mortality in Medicare beneficiaries has decreased substantially over the past decade. There was a

significant reduction in mortality for both Medicare and non-Medicare patients after implementation of the 2006 NCD. However, this improvement was more substantial in Medicare patients. Our findings may suggest the beneficial effects of the 2006 Medicare NCD.

A-126-OR
**UTILIZING NATIONAL CLINICAL DATA TO
DRIVE QUALITY IMPROVEMENT**

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Stanford University²

Background: Bariatric surgery is the only effective and enduring intervention for severe obesity. Along with demonstrated effectiveness, there have been notable improvements in patient safety specifically with mortality. As future quality improvement will move beyond mortality, there is a need to prioritize quality improvement. Real-time, clinically objective data as is present in the Metabolic and Bariatric Surgery Quality Improvement Program (MBSAQIP) can provide a platform for quality improvement. Here we describe quality improvement projects which were instigated by review of clinically rich, quality reporting data. **Methods:** Complication data from one of the precursor programs to the MBSAQIP (American College of Surgeons Bariatric Surgery Network) were reviewed and compared to national benchmark rates from 2008-2012. Three opportunities for improvement were identified: 30-day readmissions and surgical-site infection (SSI). Targeted solutions were detailed for each intervention and disseminated to the care team at monthly meetings as well as one on one detailing of surgery residents and posting of information on the resident website. For hospital readmissions, patient education and discharge planning were emphasized on daily basis, direct phone numbers for concerns was provided, BMI Clinic RN called each patient at home on first day after discharge, same day appointments were made available for concerns, and utilization of the Clinical Decision Unit for 23 hour stays was employed. For surgical-site infection, several process improvements were implemented including: Chloraprep Scrubs for patient home use before pre-op, postponement of surgery if HgA1c is > 10 and Endocrine referral, administration of 2 g antibiotics, not 1, before OR start, re-dose antibiotic if OR case > 4 hours, use Endocatch bag when removing bowel contents in OR, and wound irrigation and interrupted sub-q closure. **Results:** From 2008 to 2012, there were significant improvements (p,.05) in both readmissions and SSI. In 2008, the national benchmark for SSI was 1% with our institution having a 2.5% rate. By 2012, the SSI rate fell to 1%. In 2008, the national benchmark for 30-Day Readmissions was 5% with our institution having an 8% rate. By 2012, the 30-day readmission rate fell to 2%. **Conclusions:** Utilizing clinical, quality data can prioritize quality improvement efforts by

comparing local results to national benchmarks. By employing targeted process improvement initiatives, SSI rates can decline by 60% and 30-Day readmissions can drop by 75%.

A-127-OR COMPREHENSIVE SIMULATION- ENHANCED TRAINING CURRICULUM IN BARIATRIC SURGERY: A MORE EFFECTIVE APPROACH TO BARIATRIC SURGERY TRAINING.

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Background: Simulation-enhanced training has been shown to improve technical and non-technical skills in surgery. The effectiveness of this approach in comparison to conventional training in laparoscopic bariatric surgery is still unclear. The purpose of this prospective single-blinded randomized controlled trial was to compare the effectiveness of training in a comprehensive simulation-enhanced training (SET) curriculum in bariatric surgery to conventional surgical training (CT). **Methods:** Twenty intermediate-level surgical residents were allocated to SET and CT group. Final year (FY) residents were used as a comparison group. A cadaveric porcine jejunojunctionostomy (JJ) model was used for baseline assessment of technical skill. The SET group completed cognitive, technical and non-technical components of the curriculum. The CT group continued conventional training. Post-intervention assessment included a knowledge test, a laparoscopic JJ on a live anesthetized porcine model, a JJ in the operating room (OR), and a simulated intraoperative crisis scenario. A minimum level of proficiency in a porcine model was required prior to progression to the OR. **Results:** Twenty out of 26 eligible participants were recruited. Baseline characteristics were equivalent between SET and CT groups. SET group demonstrated higher operative skill in a live porcine model (Bariatric Objective Structured Assessment of Technical Skill (BOSATS):56.4(11.5) versus 46.0(10.6), P=0.049) and higher non-technical skill in a simulated intraoperative crisis scenario (Non-Technical Skills for Surgeons (NOTSS):40.8(4.2) versus 31.6(8.7), P<0.001). SET group required fewer cases in a live porcine model (1.6(0.7) versus 2.2(1.1)) and had more participants achieving predefined proficiency by their 2nd case (9/10 versus 3/10, P=0.020). SET group showed significant within-group improvement in technical skill from baseline to assessment in a live porcine model (BOSATS:39.0(15.1) versus 56.4(11.5), P=0.002); CT group did not (BOSATS:43.5(13.4) versus 46.0(10.6), P=0.569). Operative skill in the OR was equivalent between the groups (BOSATS:61.1(8.8) versus 64.1(10.8), P=0.529), as were the proportion of operative steps

completed without takeover (0.86(0.26) versus 0.67(0.16), P=0.096) and scores on the knowledge test (12.8(2.9) versus 13.9(1.8), P=0.324). In comparison to FY residents, SET group had equivalent operative skill in the OR (BOSATS:64.1(10.8) versus 67.3(9.6), P=0.526), higher non-technical skills (NOTSS:40.8(4.2) versus 31.3(6.2), P<0.001), lower knowledge scores (12.8(2.9) versus 15.8(2.1), P=0.020), and completed an equivalent proportion of operative steps in the OR (0.86(0.16) versus 0.86(0.14), P=0.983). **Conclusions:** Participation in the SET curriculum resulted in superior training outcomes when compared to conventional surgical training. Implementation of this curriculum will offer standardization of bariatric surgical training and ensure that comprehensive proficiency milestones are attained prior to exposure to patient care. Trial Registration: clinicaltrials.gov Identifier: NCT01610466

A-128-OR HIGH RISK ALCOHOL USE AFTER WEIGHT LOSS SURGERY: IS IT ALL BAD?

Christina Wee; Kenneth Mukamal; Karen Huskey; Roger B Davis; Mary Ellen Colten, PhD; Dragana Bolcic-Jankovic; Caroline Apovian; Daniel B Jones, MD; George L Blackburn, MD PhD

Background: Bariatric or weight loss surgery (WLS) may alter alcohol metabolism resulting in a higher prevalence of problem drinking post-operatively. However, most previous studies have focused on overall prevalence of problem drinking pre- and post-WLS, which could potentially mask any positive effects that bariatric surgery may have on alcohol use. Overall risk of high risk drinking may be underestimated if studies do not account for the possibility that a subset of patients actually have resolution of their high risk drinking post-WLS because of the greater attention being paid to caloric intake and substance abuse issues clinically post WLS. **Methods:** We recruited 654 patients contemplating WLS at 2 academic centers (70% response rate) as part of the Assessment of Bariatric Surgery (ABS) Study. We conducted telephone interviews at baseline and annually post-WLS on participants who proceeded with surgery. We elicited high risk alcohol use behavior via a modified version of the validated Alcohol Use Disorders Identification Test-Consumption (AUDIT-C). We used Pearson chi-square tests to compare patients who underwent gastric bypass procedure and those who underwent gastric banding in terms of the proportion of new high risk drinkers at 1- and 2- years post-WLS relative to baseline and the proportion of high risk drinkers at baseline who no longer reported high risk drinking at follow-up. **Results:** Of 541 participants who underwent WLS, 375 (69% retention) completed

the 1-year and 328 (63% retention) completed the 2-year interview. At 1 year, 13% reported high risk drinking compared to 17% at baseline, $p=0.10$; at Year 2, 13% reported high risk drinking compared to 15% at baseline, $p=0.39$ (figure 1). At both follow-up time points, more than half of those who reported high risk drinking at baseline no longer did so (10% at Year 1 and 8% at Year 2)(figures 1 and 2). In contrast, 7% and 6% of patients, respectively, reported new high risk drinking at 1- and 2-year follow-up. Findings were similar between gastric bypass and gastric banding at Year 1. At Year 2, gastric banding patients(11%) were twice as likely as gastric bypass patients (5%) to report amelioration of their high risk drinking behavior at baseline, $p=0.047$ (see table). **Conclusions:** Although 7 % of patients report new high risk alcohol use 1 year after WLS, more than half who reported high risk alcohol use prior to surgery discontinued high risk drinking at 1 year. The potential beneficial effects appeared more durable in gastric banding than gastric bypass patients as twice as many gastric banding patients than gastric bypass patients who were former high risk drinker remained free from high risk drinking 2 years post-WLS.

A-129-OR RISK FACTORS FOR READMISSION WITHIN 30 DAYS OF BARIATRIC SURGERY

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Background: Thirty-day readmission rates are being used as a quality measure for bariatric programs. Readmission after bariatric surgery increases expenses in the treatment of morbid obesity and contributes to patient morbidity. Knowing risk factors for readmission may help prevent such occurrences. We hypothesize that risk factors can be identified to predict which patients are likely to be readmitted 30 days after discharge from bariatric surgery.

Methods: We performed a retrospective review of all bariatric surgeries at our institution from January 2009 to April 2013. Subjects were categorized by operation: RYGB, sleeve gastrectomy, adjustable gastric banding (AGB), biliopancreatic diversion with duodenal switch (BPD/DS), or revisional surgery. Readmission within 30 days of discharge, patient's age, sex, BMI, hospital length of stay (LOS), operative duration, and 31 different co-morbidities identified for the Bariatric Outcomes Longitudinal Database (BOLD) were collected. Readmitted patients were compared to patients not readmitted using multivariate analysis. Risk factors with a P value <0.05 were entered into logistic regression using the conditional stepwise method. **Results:** In 4.3 years we performed 3,146 bariatric procedures (61.8% RYGB, 9.7% sleeve gastrectomy, 15.6% AGB, 2.4% BPD/DS, and 5.6% revisional surgery) with a total of

152 (4.8%) documented readmissions within 30 days of discharge. The readmission rates across the different procedures were statistically significant ($P=0.04$) with the individual rates being 8.8% for revisional surgery, 7.3% BPD/DS, 4.8% RYGB, 4.3% AGB, and 3.2% sleeve gastrectomy. Age, LOS, and BMI were not significantly different for patients with readmissions. Length of surgery was significantly increased in patients who were readmitted ($131 \text{ } \pm 77$ minutes vs. $116 \text{ } \pm 60$ minutes, $P=0.002$). Risk factors for increased admission rates included male gender ($P=0.008$), preoperative history of DVT ($P<0.001$), preoperative documentation of gallstones ($P<0.001$), a preoperative history of musculoskeletal disease ($P<0.001$), a diagnosis of fibromyalgia ($P=0.001$), diagnosis of gastroesophageal reflux disease (GERD) ($P=0.017$), and preoperative symptoms of back pain ($P=0.022$). Duration of surgery, sex, history of DVT, preoperative gallstones, musculoskeletal disease, and fibromyalgia remained statistically significant after multivariate logistical regression analysis (see table). **Conclusions:** Readmission rates after bariatric surgery are relatively low in a patient population with significant comorbidities compared to other elective surgery populations. Most of the comorbidities collected in our prospective database did not increase the risk of readmission. Of those that we identified as being a risk factor for readmission, gallstones and a history of DVT may be the most clinically significant. A change in the perioperative care of patients with gallstones or a history of DVT may have the potential to further decrease readmission rates.

A-130-OR REDUCED SURVIVAL IN BARIATRIC SURGERY CANDIDATES DELAYED OR DENIED BY LACK OF INSURANCE APPROVAL

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*University of North Carolina*²

Background: Bariatric surgery reduces mortality for morbidly obese patients. Patients who seek surgery may have access limited by a variety of factors. Not all potential patients have insurance coverage or the means to pay. Those who do have existing benefits for bariatric surgery and who are deemed suitable candidates by bariatric physicians are sometimes denied by insurers based on stipulations for documenting co-morbid conditions and non-surgical treatment attempts. Therefore, the insurance approval process may limit access for some patients, delaying surgery for weeks, months, or indefinitely. The long-term impact of these care delays on survival is unknown. **Methods:** Using our intake database, we identified all patients who presented seeking bariatric surgery between August 2003 and December 2008, who were cleared as acceptable candidates by our

multidisciplinary medical team (surgery, psychology and nutrition providers) and for whom insurance approval had been requested. We then compared survival in those who were denied coverage by their insurance carriers to those who were approved. Mortality was determined using two identifiers through the Social Security Death Index, through January 1, 2013. Kaplan-Meier survival curves were plotted and the Log-Rank test for significance was applied using SPSS 21.0. **Results:** During the study period, 463 patients (391 females, mean age 45 +/- 10 years, mean BMI 52.5 +/- 9.4 kg/m²) were medically cleared for a bariatric procedure. Of these, 363 were approved by insurance and had surgery without delay, whereas 100 were denied on initial request. At least nine patients were eventually able to overturn their denial and have a weight-loss procedure, however these were included with the subject cohort as the study's intention was to aggregate delayed patients with denied patients to evaluate the impact of primary insurance denial. Follow-up ranged from 0-113 months, finding 6 (6%) of the initially-denied patients deceased compared with 7 (1.9%) in the control group. Kaplan-Meier survival analysis (figure) shows a statistically-significant survival benefit among patients who were initially approved for bariatric surgery versus those who were delayed or denied ($p < 0.001$). **Conclusions:** At our institution, access to bariatric surgical care was delayed or prevented by lack of insurance approval in 22% of patients with multidisciplinary medical clearance. The 6% mortality in these subjects is 3 times that of controls that were approved and had bariatric surgery without delay. Insurance approval processes that delay or restrict access for bariatric surgery candidates are associated with a survival disadvantage.

Thursday, November 14, 2013
3:00 pm – 5:00 pm EST

Symposium V/Paper Session VI: Emerging Technologies

A-131-OR THE DUODENAL-JEJUNAL BYPASS SLEEVE (ENDOBARRIER GASTROINTESTINAL LINER) FOR WEIGHT LOSS AND TREATMENT OF TYPE II DIABETES

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Background: The Duodenal-jejunal bypass sleeve (EndoBarrier Gastrointestinal Liner) is an endoscopically and fluoroscopically inserted implant designed to aid weight loss, treat type II diabetes mellitus and improve the cardiovascular risk profile of subjects. It is an impermeable fluoropolymer sleeve that is reversibly fixated to the duodenal bulb and

extends 80cm into the small bowel, usually terminating in the proximal jejunum. It creates a barrier between chyme and the wall of the intestine thus delaying the mixing of digestive enzymes with food. It alters the activation of hormonal signals that originate in the intestine, thus mimicking the effects of a Roux-en-Y gastric bypass procedure without surgery. **Methods:** In order to assess efficacy and safety, we implanted the EndoBarrier bypass sleeve into 57 patients between January 2011 and December 2012. We performed subset analysis on 10 patients for whom detailed weight and HbA1c measurements were available at a follow-up time point of 12 months. **Results:** Results showed weight loss in all patients, as well as lowering of blood sugar levels. Only 1 early device removal (due to sleeve migration) occurred. There were no major postoperative side effects. At a 12 month time point, the weight loss in our cohort ranged from 5.71% to 28.44% (mean of 12.46%). HbA1c reduction ranged from 9.09% to 29.76% (mean of 19.15%). **Conclusions:** Results confirm that the device reduces blood sugar levels and triggers weight loss. This non-permanent device implanted and removed endoscopically, controlled blood sugar and weight loss without the trauma of surgery. Clinical trials to date, involving more than 300 patients, have demonstrated significant weight loss and diabetes improvement with the Endobarrier. However, since this is a new procedure and due to the lack of data, it is not yet known if weight loss and diabetes benefits will persist.

A-132-OR DUODENAL ILEAL INTERPOSITION WITH SLEEVE GASTRECTOMY IS VERY EFFECTIVE FOR TREATMENT OF TYPE 2 DIABETES AND METABOLIC SYNDROME

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Background: Combination of Laparoscopic Duodenal Ileal Interposition (DII) with sleeve gastrectomy (SG) is an upcoming procedure, which offers good metabolic improvement and weight reduction without causing significant malabsorption. The objective of this study was to evaluate the results of this novel procedure for control of type 2 diabetes, obesity, hypertension and related metabolic abnormalities. **Methods:** The DII & SG was performed in 200 patients from March 2010 to April 2012 in 2 centers as a multicentric study. Participants had mean age of 47.2 \pm 8.2 years (range 29-66 years), mean duration of diabetes 10.1 \pm 9.2 years (range- 1 to 32 years) and mean preoperative BMI 33.2 \pm 7.8 kg/m². All patients had poorly controlled type 2 diabetes mellitus (mean HbA1C- 9.6 \pm 2.1%) despite use of oral hypoglycemic agents (OHA) and/or Insulin. 70% patients had hypertension, 46% had dyslipidemia and 42% had significant microalbuminuria. The primary

outcome was remission of diabetes (HbA1C < 6.5% without OHAs/ Insulin) and secondary outcomes were changes in drug requirement and components of metabolic syndrome. **Results:** Follow up was for 12-36 months. Postoperatively glycemic parameters (FBS, PLBS, HbA1C) improved in all patients ($p < 0.05$) at all intervals. 77% had remission in diabetes and the remaining patients showed significantly decreased OHA requirement. All patients had weight loss between 15%-30% ($p < 0.05$). 90% had remission in hypertension; Resolution of Dyslipidemia in 95%, Microalbuminuria in 80%. At 2 years mean fall in HbA1C (34%) was more than reduction in BMI (25%). **Conclusions:** This multicentric study indicates that laparoscopic Duodenal Ileal Interposition with sleeve gastrectomy seems to be a promising procedure for control of Type 2 DM, hypertension, weight reduction and associated metabolic abnormalities.

A-133-OR WEIGHT LOSS AND IMPROVED QUALITY OF LIFE WITH A NOVEL, NON-SURGICAL ENDOSCOPIC TREATMENT FOR OBESITY: CLINICAL RESULTS FROM A 3 AND 6-MONTH STUDY.

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Background: The TransPyloric Shuttle® (TPS®) is a non-surgical device that is delivered endoscopically to the stomach to treat chronic obesity. The TPS is deployed into the stomach to mechanically form a large spherical bulb connected to a smaller cylindrical bulb by a flexible tether. The larger bulb prevents migration from the stomach, while the smaller bulb passes freely into the duodenum during peristalsis to enable self-positioning of the TPS across the pylorus. Once transpyloric, the larger bulb engages the pylorus directly to form an intermittent seal designed to delay gastric emptying, enhance satiety, and enable a reduction in caloric intake. **Methods:** Patients enrolled in a prospective, open-label, non-randomized single-center study in Sydney, Australia. Subjects were serially assigned to three-month and six-month treatment cohorts. Change in excess weight and weight specific quality of life were evaluated as part of this study. The Impact of Weight on Quality of Life-Lite (IWQoL-Lite) Questionnaire was administered at baseline and end of treatment to assess the effect of obesity on an individual in five domains: Physical Function (PF), Self-Esteem (SE), Sexual Life (SL), Public Distress (PD), Work (W), and Overall (O). Higher scores are positive, indicating that obesity has less impact on emotional and physical well-being. **Results:** TPS delivery and removal procedures were successfully performed in outpatient

endoscopic settings using a standard gastric overtube for access and esophageal protection. Deployment and retrieval times for the device were typically less than 15 minutes (10.3 +/- 3.9 and 12.9 +/- 6.4, respectively). Devices were removed 1-2 weeks prior to completion of the planned treatment period in two subjects due to the development of symptomatic gastric ulcerations. Baseline mean body mass index (BMI) across the twenty subjects was 36.0kg/m2 ± 5.4kg/m2. At device removal, mean BMI reductions were 3.1 kg/m2 ± 1.7 kg/m2 and 5.6 kg/m2 ± 2.1 kg/m2 in the three and six-month cohorts respectively. This equated to a percent EWL of 31.3% ± 15.7% at three months and 50.0% ± 26.4% at six months. Crosby, et al (2004) determined that a 7.7 to 12-point increase in the IWQoL-Lite scores represented a meaningful improvement in weight-related quality of life. After treatment, three-month patients IWQoL-Lite mean scores improved by 17.4 ± 15.7, 32.9 ± 23.7, 21.8 ± 24.4, 11.3 ± 21.0, 16.3 ± 18.4, and 20.4 ± 14.2 for PF, SE, SL, PD, W, and O scores, respectively. Six-month patients IWQoL-Lite mean scores improved by 26.3 ± 26.0, 34.8 ± 25.5, 29.1 ± 26.6, 8.9 ± 19.8, 6.8 ± 15.3, and 23.2 ± 20.5 for PF, SE, SL, PD, W, and O scores, respectively. **Conclusions:** Obesity represents a major health concern facing our population today. In addition to increased health risk, obesity often carries with it a significant and negative impact on an individual's quality of life (QoL). The present study demonstrated substantial weight loss in 20 subjects using an experimental, non-surgical device therapy. Treatment with the TPS was safe, well-tolerated and resulted in meaningful improvements in weight-related QoL measures that reached statistical significance ($p < 0.05$) in four of the five domains of the IWQoL-Lite (PF, SE, SL, and O) after three and six-month periods.

A-134-OR GREATER CURVATURE PLICATION WITH LAPAROSCOPIC ADJUSTABLE GASTRIC BAND

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Background: Greater curvature plication of the stomach has emerged as an evolving bariatric procedure which provides restriction and food volume reduction while seeking to avoid the issues inherent to gastric stapling. In similar fashion, proponents of laparoscopic adjustable gastric banding have long advocated for the safety benefits of attempting to maximize the preservation of normal anatomy. Most recently, reports and publication have appeared which indicate that these two procedures may be synergistic

in achieving greater clinical benefit. **Methods:** A prospectively analyzed and examined population of 210 greater curvature plications combined with the laparoscopic adjustable gastric band was compared against a historic control of 134 standard laparoscopic adjustable gastric bands. All patients were enrolled through a dedicated multidisciplinary bariatric surgical specialty center with IRB monitoring and approval (Feinstein Institute for Medical Research Study of the North Shore-LIJ Health System study #11-277A; FDA registered clinical trial #01703546.). **Results:** A total of 210 patients were enrolled as consenting for greater curvature plication in combination with laparoscopic adjustable gastric band insertion and intra-operative upper endoscopy. The first 10 patients were excluded from statistical analysis as "run-in" patients to minimize any learning curve issues. A subsequent 17 patients were then excluded from having the combined procedure done secondary to intra-operative findings of more complex anatomy requiring a secondary procedure (i.e. hiatal hernia repair.) A total of 183 patients are therefore currently enrolled with six month follow-up data as shown: Table I. Comparative weight results at six month follow-up Study Population BMI at Six Months Excess Weight Loss Percentage LAGB-P 38.2 + 4.8 (37.4) 29.9 + 12.5 (29.6)LAGB 40.5 + 5.5 (40) 25.2 + 12.1 (24)P-value P<0.024 P<0.034Reported as mean + standard deviation and (median)At the time of this submission an ongoing comparative review of twelve month follow-up data and adverse events/ serious adverse events is being conducted. No mortality was present associated with surgery or anesthesia in either the study population or historical control group. **Conclusions:** Greater curvature plication in conjunction with the placement of a laparoscopic adjustable gastric band is a safe, technically feasible procedure which demonstrates a statistically significant improved short-term weight loss when compared to standard laparoscopic adjustable gastric banding. This data represents the first clinical study from a western nation pertaining to this combined operation. While an ideal comparison would involve a randomized multi-center study, the short-term results obtained and presented here, show an improved %EWL versus laparoscopic adjustable gastric banding. This outcome should prompt and promote further investigations.

A-135-OR CARDIAC SEPTAL OCCLUDER DEVICE FOR TREATMENT OF GASTRIC FISTULA AFTER BARIATRIC SURGERY

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Background: Gastric leak and subsequent fistula is one of the most severe complications in bariatric surgery. Its management is challenging. In recent years, endoscopic stenting has become our treatment of choice. However, stents need to be removed and this leads to potential complications. Furthermore, there is a small group of patients in which the fistula fails to close after stent removal. Self-expandable nitinol devices designed for cardiac septal defect closure (Amplatzer®) have been previously used to treat digestive tract fistulae (not related to bariatric surgery). We present our early experience with this approach for bariatric surgery leaks and fistula.

Methods: Eleven patients underwent endoscopic Amplatzer® placement; eight had mature gastric fistulas and three had leaks within 7 days of surgery. The eight patients with fistula were 7 months post-surgery on average (range 1 to 16 months). In this group, six had sleeve gastrectomy (SG) and two gastric bypass (GBP). Six had gastrocutaneous fistula and two gastropleural fistula. Six had undergone self-expandable metal stent (SEMS) placement and failed to close the fistula. Two received long-term enteral nutrition via gastrostomy or jejunostomy as primary treatment, which also failed. The three patients with post-surgical leaks were two SG and one GBP.

Results: All eight patients with mature fistula had complete resolution of abdominal skin drainage or thoracic tube drainage within ten days after placement. The occluder device was assembled inside an adapted 10 or 7 Fr. biliary catheter in order to provide enough length to be discharged through a 2.8 or 3.2 mm working channel gastroscopy. Fluoroscopy was not used in any case. A post-procedure contrast swallow study was negative for all patients. Contrast swallow and upper endoscopy were repeated after 3 weeks and confirmed fistula closure. These patients have been followed up for an average of 56.5 days and remain without recurrence. The 3 patients with acute leaks showed good initial response but skin drainage appeared after 5 to 6 days. In this group the occluder device was endoscopically removed and SEMS were placed with complete resolution of the leak. There were no complications related to the occluder device or its placement. **Conclusions:** Septal cardiac occluder device seems to be an effective and safe alternative to treat gastric fistulae secondary to bariatric surgery. We observed complete resolution of two gastropleural fistulae and six gastrocutaneous fistulae. The occluder device does not seem to be effective in the treatment of early post-operative bariatric gastric leaks. In our opinion, these are best treated with SEMS placement.

**Thursday, November 14, 2013
3:00 pm – 5:00 pm EST**

Paper Session VII: Revisional Surgery

A-136-OR UPDATE ON SALVAGE LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING FOR FAILED ROUX-EN-Y GASTRIC BYPASS

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Background: After Roux-en-Y gastric bypass (RYGB) up to 15% patients fail to achieve 50% excess weight loss (%EWL) at 2 years. Various endoscopic therapies have been reported, most with limited success. Salvage laparoscopic adjustable gastric banding (LAGB) over the primary gastric bypass is well described, although there are few studies sufficiently powered to assess its efficacy. The largest published series of salvage band over bypass to date is 43 patients from our own institution. We aim to update these data with a further 3 years follow-up and report our experience with an additional 82 patients. **Methods:** Retrospective review of our prospectively maintained database was undertaken. Data collected and analyzed included weight, height, body mass index (BMI), gender, race, age, operative time, band type, hiatal hernia repair, length of stay and post-operative complications. **Results:** A total of 125 patients (102 female, 23 male) underwent salvage LAGB for weight loss failure after primary RYGB, the majority 102 (83%) having undergone initial surgery elsewhere. An average of 12.7 years (range 15-1324 months) had elapsed from primary RYGB. Mean age at revision was 47.0 years (+/-10.7). Mean BMI before RYGB was 51.2kg/m² (+/-8.78), before salvage LAGB 43.0kg/m² (+/-6.57) and fell to 35.9kg/m² (+/-6.75) at 1 year, 33.8kg/m² (+/-7.19) at 2 years and 33.9kg/m² (+/-6.37) at 3 years. There was improvement in excess BMI loss from 30.4% (+/-19.6) on referral to 50.1% (+/-38.7) on average 28 (+/-21) months from revision band over bypass. Nineteen (15.2%) patients required re-operation for complications related to the LAGB including 6 (4.8%) band erosions, 10 (8%) port/tubing revisions for leakage or migration, 2 (1.6%) band slips and 1 (0.8%) port infection. The significant factor in predicting band erosion was length of interval from initial bypass surgery (301 months versus 152 months p<0.05) There was no mortality. **Conclusions:** Patients with weight loss failure after LRYGB have limited options. Surgical options such as lengthening the bypass or performing a duodenal switch have been associated with complications such as malnutrition. Salvage LAGB provides good further weight loss, although the higher rate of re-operation for band-related complication merits appropriate patient counseling and close follow-up.

A-137-OR

COMPARISON BETWEEN ROUX-EN-Y GASTRIC BYPASS AND GASTRIC SLEEVE AS REVISIONAL SURGERY AFTER FAILED LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING.

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Background: Despite its worldwide popularity, laparoscopic adjustable gastric banding (LAGB) requires revisional surgery for failures or complications in nearly 30-40% of cases at 5 years. Conversion to gastric bypass is considered the treatment of choice after failed LAGB. Nevertheless laparoscopic sleeve gastrectomy has been recently used to revise failed restrictive procedure. The purpose of this study was to compare the outcomes for LAGB conversion to laparoscopic Roux-en-Y Gastric Bypass (LRYGB) and Gastric Sleeve (LGS). **Methods:** A retrospective review of a prospectively maintained database and medical records of consecutive morbidly obese patients who had undergone primary LAGB and revisional surgery after failed primary LAGB during the period from January 2008 to September 2012 was performed. The indication for revision, revisional procedures performed, and surgical approach were evaluated. **Results:** One hundred and eight patients were included. Of these, 74 (68.5%) underwent conversion to LRYGB and 34 to LGS. Indications for re-do surgery were inadequate weight loss or weight regain in 75 patients and band-related complications in 33 (band erosion: 5, band slippage: 10, megaesophagus: 7, band infection: 3, gastroesophageal reflux: 8). All the procedures were performed in two-stage. Revisional surgery was completed laparoscopically in 105 patients (97%) amenable to a minimally invasive approach. All the procedures converted were in the group of LRYGB. The mean follow-up after LRYGB was 29.15 Å± 17.92 months while after LGS was 24.29 Å± 14.31 months. The mean BMI prior LRYGB and LGS was 45.61 Å± 5.69 and 47.58 Å± 7.82, respectively. Major early complications (life-threatening complications and/or those that led to early reoperations) occurred in 8.1 % of patients in LRYGB group and in 5.8 % of LGS group, without significant differences. The average %EWL at 24 months and 36 months after conversion was, in the LRYGB group, 70.29% and 68.39 % respectively while in LGS group was 65.54%. and 59.93%. **Conclusions:** LAGB has a considerable failure and complications rate. Revision of failed LAGB to LRYGB has already been accepted as safe and effective salvage therapy. Our experience has shown that also conversion to LGS is safe and allows patients substantial additional weight loss.

A-138-OR

REVISIONAL SURGERY FOLLOWING LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING

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Surgical Weight Loss Center- Hartford Ho¹

Background: Laparoscopic adjustable gastric banding (LAGB) has a relatively high re-operation rate as compared to alternative bariatric procedures. The best surgical conversion option for these patients is currently unknown. We report our experience with revisions performed following LAGB at a high-volume bariatric practice. **Methods:** This was a retrospective review of our prospective bariatric database. All patients who underwent a LAGB procedure at our practice between December 2005 and December 2012, and at least one subsequent revisional procedure were included in the study. Band revisions were excluded. Peri and post-operative data on both surgeries and weight loss data were collected.

Results: 126/1465 LAGB patients (9%) underwent 148 revisional procedures. 20 (16%) underwent two reoperations and 1 underwent three. Average time between LAGB and first revision was 28 months (range: 0.5-75). 32 patients (25%) underwent band removal. 17 (53%) were due to band intolerance and chronic reflux, 11 (34%) band prolapse, 2 (6%) infection, and 1 each (3%) continued morbid obesity and unrelated emergency surgery. Of these, 14 (44%) underwent a second revision at a later time and 18 (56%) did not pursue further bariatric surgery. 44 patients (35%) underwent band replacement. 40 (91%) due to prolapse, 3 (7%) intolerance, and 1 (2%) band malfunction. Of these, 4 (9%) underwent a second revision, and 1 underwent a third. 14 patients (11%) underwent SG conversion. 6 (43%) due to prolapse, 5 (36%) continued morbid obesity, 2 (14%) intolerance, and 1 (7%) chronic infection. Of these, 1 underwent a second revision. 36 patients (29%) underwent RYGB conversion. 17 (47%) were due to intolerance and chronic reflux, 16 (44%) prolapse, and 3 (8%) continued morbid obesity. One patient with concomitant repair of a massive incisional hernia died of respiratory failure after prolonged hospitalization. Figure 1 details revisions. Ultimately, 47 (37%) ended up with RYGB, 42 (33%) LAGB, and 19 (15%) SG. 1-year %EWL was 60%, 55%, and 52%, respectively. **Conclusions:** In this sample, data indicate that patients who require a revisional procedure following LAGB achieve weight loss comparable to the individual bariatric procedures (RYGB, SG). LAGB is considered the safest bariatric surgery, however it is associated with a relatively high reoperation rate. These revisional surgeries can be performed laparoscopically with acceptable weight loss results.

A-139-OR

CRITICAL APPRAISAL OF SALVAGE BANDING FOR WEIGHT LOSS FAILURE AFTER GASTRIC BYPASS

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Background: The estimated weight loss failure rate of Roux-en-Y gastric bypass (RYGB), as the most common bariatric procedure in US, is around 10-20%. One potential causative factor is enlargement of proximal gastric pouch. Various revisional procedures have been described to amend loss of restriction. The placement of an adjustable gastric band over the gastric pouch as a salvage procedure after RYGB failure has been associated with different results in about 100 reported patients in literature. The aim of this study was to evaluate feasibility, safety, and outcomes of adjustable gastric banding after RYGB failure. **Methods:** Between June 2008 and August 2011, 28 morbidly obese patients (male-to-female ratio of 5:23, mean age of 47.6±10.3 years) who underwent laparoscopic placement of adjustable gastric band around gastric pouch as a revisional bariatric procedure for inadequate weight loss or significant weight regain after RYGB were identified in a single institution database. Baseline characteristics, perioperative data, and medium-term outcomes were assessed. **Results:** Seventy-nine percent of patients had history of open RYGB with a mean interval of 8.9±4.8 years between procedures. The mean BMI at the time of RYGB and band placement was 55.7±9.7 and 45.7±8.1 kg/m², which corresponded to median percent excess weight loss (EWL) of 36.1% prior to band placement. There were 3 (11%) intraoperative complications during take down of dense adhesions including capsular tear of spleen, bile leak from left lobe of liver, and colon perforation. The later patient was converted to laparotomy and band placement was abandoned due to contamination. The mean estimated blood loss, adhesiolysis time, and operative time were 125.4±188.6 ml, 82.9±50.6 minutes, and 137.9±52.3 minutes (>2 hours in 71% of cases), respectively. In the 30-day postoperative period, two (7%) patients underwent re-laparoscopy and temporary removal of subcutaneous port due to infection. After 1-year, the BMI and median EWL of cohort were 41.1±9.4 kg/m² and 18.5% (68% had EWL<25%), respectively. In the mean follow-up of 31.7±13.1 (range, 12-54) months, 5 (18%) bands removed due to ineffectiveness (n=2), dysphagia (n=1), erosion (1), and perforation of gastrojejunal anastomosis which led to peritonitis 10-days after band adjustment. At long-term, the median EWL was 12.3% (82% had EWL<25%). **Conclusions:** Results of this study, which is one of the largest reported series, indicate that laparoscopic placement of

adjustable band around the gastric pouch after RYGB failure is technically challenging (particularly after open RYGB) due to dense adhesions, carries significant morbidity, and is associated with only 12% additional EWL. Larger series with longer follow-up time for more accurate assessment of risk-benefit ratio of this procedure is needed.

A-140-OR LESS IS MORE: BARIATRIC SURGERY RELATED WEIGHT LOSS IN PUBLICLY INSURED PATIENTS AND DURATION OF MANDATED PREOPERATIVE DIET PROGRAM

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Alpert Medical School at Brown University³

Background: Most insurers require a mandatory medically supervised diet program (MSWL) as part of preoperative requirements for weight loss surgery patients. Effectiveness of these programs and the length of these programs are often not based on successful clinical outcome. We compared the effectiveness of the MSWL for publicly funded insurers (GF) to privately funded (PF) insurers.

Methods: In a three year retrospective study of 300 consecutive preoperative medically managed weight loss patients, data was collected on weight loss/gain and BMI changes during the preoperative phase and post operatively at the 6 month follow up visit. The patients were divided into 2 groups based their insurance carrier. MSWL was provided by the same registered dietitians based on monthly 30 to 45 minute educational and counseling sessions.

Results: In GF group, all patients (n=77) required to go through >3 mo. of MSWL, while in PF, 171 patients did 3 months (PF3) and 51 patients 6 months (PF6) MSWL. Prior to starting MSWL program, weight and BMI for GF and PF were similar (299# and 48.2 vs.. 284# and 46.5) The average weight change from MSWL and % Weight loss was dismal across the groups. GF gained 1.03 (0.003%), PF3 lost 0.13 (approx. 0) PF6 lost 3.9 (1.3%) pounds during the preoperative MSWL period. After surgery at the 6 month post-operative mark, GF lost 36.8, PF3 lost 77.6 and PF6 lost 68.6 pounds. As a group GF group had significantly less weight loss compared to the PF group as a whole (P<0.05). In GF group ratio of Gastric Bypass: Band: Sleeve gastrectomy was 64%:11%: 25% compared to 59%: 26%: 15% in PF group. Dietician's charges for one MSWL session was \$110, so PF3 spent an average of \$330/patient for pre-op nutritional counseling, while GF spent an average of \$660/patient for pre-op nutritional counseling. **Conclusions:** Our study does not support preoperative MSWL for longer durations than

3 months, based on preop and post-operative weight loss data regardless of insurers. In general GF patients had nearly half the weight loss compared to PF pts. in spite of a longer preoperative MSWL. This was in spite of having more % patients undergoing Gastric bypass in GF group compared to the PF group. Our data suggest longer MSWL (>3m) in GF doesn't help with weight loss and leads to more costs to the patient and healthcare system. Further analysis is needed to evaluate the suboptimal weight loss in GF patients such as the barriers to weight loss and access to food and/or exercise and nutritional awareness education.

A-141-OR SHORT-TERM MORBIDITY ASSOCIATED WITH REMOVAL AND REVISION OF THE LAPAROSCOPIC ADJUSTABLE GASTRIC BAND

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University of Toronto¹

Background: Laparoscopic adjustable gastric band (LAGB) placement is among the most commonly performed bariatric procedures, principally due to its low-risk profile in the short term. However, the overall morbidity is underestimated if long-term safety and efficacy are not considered, since a significant number of patients will go on to require removal or revision. The objective of this study was to define the 30-day morbidity associated with LAGB removal and revision procedures. **Methods:** Patients undergoing revision or removal of LAGB were identified within the ACS-NSQIP participant use file from 2006-2011. CPT codes were used to group patients into those undergoing removal, revision or port site procedures. Patients undergoing concurrent procedures (e.g. conversion to other bariatric procedures or gastric resection) or ICD-9 coding consistent with an alternative diagnosis were excluded. We measured 30-day mortality and post-operative occurrences captured within the database. We also compared the rate of complications in removals/revision patients to primary LAGB insertion, and analyzed trends over time. **Results:** A total of 3,236 patients underwent LAGB removal (n = 1,580), revision (n=1,111) or port site revision (n=545) from 2006-2011. The overall 30-day complication rate was 5.6% (95% CI: 4.8%, 6.4%). Considering the 1,580 patients who only underwent band removal there was one death (0.06%) and a 6.8% (95% CI: 5.6%, 8.1%) complication rate (2.5% infectious, 2.3% wound, 2.4% reoperation). In 1,111 with LAGB revision, there was one death (0.06%) and a 4.3% (95% CI: 3.2%, 5.7%) overall complication rate (1.2% infectious, 1.0% wound, 2.3% reoperation). In 545 port site revisions, 4.6% (95% CI: 3.0%, 6.7%) of patients experienced complications (2.0% wound, 2.4% reoperation) with

no mortalities. From 2006-2011, 24,438 patients underwent primary LAGB insertion within the dataset with a 30-day complication rate of 2.6%. The rate of complications in patients undergoing LAGB removal (6.8%) was significantly higher than the rate of complications in patients undergoing initial insertion of LAGB with OR 2.72 (95% CI: 2.18, 3.37). Furthermore, the proportion of patients undergoing removal or revision of the LAGB compared to primary placement increased annually over the study period (P for trend <0.001). **Conclusions:** The 30-day morbidity associated with LAGB revision and removal procedures is significantly higher than the short-term morbidity associated with primary LAGB insertions. There was a steady increase in the number of LAGB revision procedures compared to insertions annually in our study population. The potential need for future procedures and the associated additional morbidity should be considered when evaluating the safety and efficacy of the LAGB as a treatment modality for morbid obesity.

A-142-OR SUMMARY CHARACTERISTICS OF PATIENTS UNDERGOING BARIATRIC SURGERY IN THE UNITED STATES FROM JUNE 2007 TO MARCH 2012: A REPORT FROM BOLD

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Duke University Medical Center¹
MGH²
Stanford Medical Center³
University of California, Irvine⁴
ASMBS⁵

Background: This report summarizes the characteristics of patients entered in the Bariatric Outcomes Longitudinal Database (BOLD) from June 2007 until March 2012 by surgeons who participated in the American Society for Metabolic and Bariatric Surgery (ASMBS) Bariatric Surgery Centers of Excellence (BSCOE) program. After March 2012, ASMBS transitioned its quality and data program from the Surgical Review Corporation to the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) in collaboration with the American College of Surgeons. This summary is being presented on behalf of the Executive Council and Research Committee of ASMBS. **Methods:** BOLD, a prospective multi institutional registry was used primarily for quality assurance but, also for research. It was queried from June 2007 to March 2012 after obtaining IRB approval and a data use agreement. Variables included the numbers of surgeons and hospitals participating in the ASMBS-BSCOE program, total

number of patients undergoing bariatric operations, number of research-consented subjects, and distribution of patients by age, gender, body mass index, ethnicity, and bariatric procedure types. Outcomes included mortality and selected serious adverse event including pulmonary embolism, leaks, and bleeding. **Results:** 1026 surgeons from 709 institutions entered data on 394,757 patients. Of these patients, 450 (0.11%) were less than 18 yrs. old and 27056 (6.85%) were > 60 yrs. Majority were female (78.47%). Major ethnicities were Caucasian (69.22%), African American (11.94%) and Hispanic (7.5%). Mean BMI was 46.32% kg/m² and 3.97% had a BMI \geq 60 kg/m². The gastric bypass was the most common bariatric operation (49.36%), followed by adjustable band (35.77%), the sleeve (10.26%) and the duodenal switch (0.93%). Procedure-specific but non-risk adjusted mortality and selected serious adverse events (pulmonary embolism, leaks and bleeds) from the day of operation to 1 year, are presented in table 1. The majority of these complications were reported within the first 30 days after surgery. Presence of comorbidity at baseline and outcomes by ethnicity were studied in a subset. African Americans had a higher prevalence of hypertension than Caucasians. However Caucasians had more gastroesophageal reflux disease (GERD), obstructive sleep apnea (OSA) and diabetes. Significant ethnic variations were noted in weight loss and resolution of comorbidities but, all showed significant improvement over baseline. Of the total patients, 275007 (70%) were consented for research. **Conclusions:** This is a summary report of data from BOLD from June 2007 to March 2012 and describes the important characteristics of patients undergoing bariatric surgery across the United States. Most bariatric surgery patients are female. Gastric bypass is still the most commonly performed procedure followed by the adjustable band. Most mortality and serious adverse events occur within the first thirty days.

Thursday, November 14, 2013
8:00 am – 10:00 am EST

Video Session B

A-104-V STAGED CONVERSION OF A DISTAL ROUX-EN-Y GASTRIC BYPASS TO A DUODENAL SWITCH FOR WEIGHT LOSS FAILURE AND DIARRHEA

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MD¹
ALSA - UCSF Fresno¹

Background: Bariatric surgery is an effective modality for the treatment of obesity and related comorbidities; however, a number of bariatric patients suffer from weight recidivism or adverse symptoms. Some of these patients may benefit from surgical revision of the anatomy. **Methods:** This video shows the conversion of distal Roux-en-Y gastric bypass to duodenal switch for diarrhea and inadequate weight loss. **Results:** Patient is a 32 year-old male who previously underwent Roux-en-Y gastric bypass, followed by distalization of his bypass for weight loss failure. His weight loss was significant but not optimal (BMI 60kg/m² preoperatively to 40kg/m² postoperatively). He also developed frequent diarrhea after the distalization. Therefore, he underwent a staged conversion to sleeve gastrectomy followed by conversion to duodenal switch with no perioperative complications. Diarrhea has resolved and his current weight loss is promising. **Conclusions:** Staged conversion of Roux-en-Y gastric bypass to duodenal switch is feasible and may optimize weight loss and alleviate side effects.

A-105-V MANAGEMENT OF COMMON BILE DUCT STONES AFTER GASTRIC BYPASS USING TRANSGASTRIC ERCP

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University of Toronto¹
Humber River Regional Hospital²

Background: The most effective management of common bile duct stones is ERCP. Management of common bile duct stones after gastric bypass can be challenging because the duodenum is excluded from the upper GI tract. Techniques have been described using retrograde balloon endoscopy to access the excluded duodenum. Laparoscopic common bile duct

exploration has also been described. These are challenging and time consuming procedures. **Methods:** This video demonstrates the technique of using laparoscopic transgastric ERCP to perform papillotomy and extraction of common bile duct stones. The technique involves using standard laparoscopic and ERCP equipment. **Results:** A gastrotomy is made in the excluded gastric remnant and a 12 mm port is directed towards the pylorus to facilitate the side viewing endoscope to enter into the excluded duodenum. **Conclusions:** A standard ERCP and papillotomy can be performed and the common bile duct stones can be safely removed.

A-106-V SPECTRUM OF INTRAOPERATIVE AND EARLY POSTOPERATIVE GASTROINTESTINAL HEMORRHAGE DURING GASTRIC BYPASS

Christopher S Armstrong, MD¹; Ninh T Nguyen, MD¹;
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University of California, Irvine¹

Background: Gastrointestinal hemorrhage is a potential perioperative complication associated with Roux-en-Y gastric bypass. Surgeons performing this procedure should understand the need for early recognition and management of this complication, as it can be life threatening. This video reviews the spectrum of both presentation and management of gastrointestinal bleeding associated with gastric bypass occurring intraoperatively or in the early postoperative period (<12hrs). **Methods:** Six cases of perioperative gastrointestinal bleeding associated with gastric bypass presenting at our institution were compiled to provide an overview of this clinical problem and highlight management. **Results:** Six cases of perioperative gastrointestinal bleeding were compiled to demonstrate potential etiologies of GI bleeding associated with gastric bypass. Bleeding from the gastrojejunostomy, gastric pouch staple line, jejunojunctionostomy and gastric remnant are shown. Management strategies including diagnostic laparoscopy, esophagogastroduodenoscopy, laparoscopic packing and laparoscopic suturing are demonstrated. **Conclusions:** GI hemorrhage is a potential complication associated with Roux-en-Y gastric bypass. Prompt recognition and management are important to minimize morbidity from this potentially life threatening complication. Clinically significant early bleeding (<6hrs) following gastric bypass is best managed in the operating room where laparoscopy and endoscopy can be performed concomitantly.

A-107-V

LAPAROSCOPIC CONVERSION OF SLEEVE GASTRECTOMY TO GASTRIC BYPASS

Hideharu Shimizu, MD¹; Eric Ahnfeldt, DO; Stacy A Brethauer, MD
Cleveland Clinic OH¹

Background: A 45 year old female with history of sleeve gastrectomy presented with chronic GERD, nausea, emesis, and food intolerance. She has lost a significant amount of weight after sleeve gastrectomy with BMI dropping from 47 to 30. Upper gastrointestinal tract series (upper GI) demonstrated significantly delayed passage of contrast at the incisura. Upper endoscopy showed a sharp angulation at the incisura. She was diagnosed with a functional sleeve stricture. **Methods:** We performed laparoscopic conversion of sleeve gastrectomy to Roux-en-Y gastric bypass. Upon entry into the abdominal cavity, the sharp angulation at the incisura was easily seen and confirmed by intraoperative endoscopy. After a stomach pouch was created, the stricture part was removed. A functional end-to-side jejunojejunostomy was made with a 50 cm biliopancreatic limb and a 150 cm Roux limb. A linear stapled gastrojejunostomy was created in an antecolic fashion. A remnant gastrostomy tube was placed for postoperative enteral access. **Results:** Postoperative upper GI showed no leak. She recovered well and was discharged home without any complications.

Conclusions: Chronic stricture at incisura angularis after sleeve gastrectomy was successfully treated by conversion to Roux-en-Y gastric bypass.

A-108-V

REVERSAL OF ROUX-EN-Y GASTRIC BYPASS FOR CHRONICALLY PERFORATED MARGINAL ULCER

H. Ruby Gatschet¹; Cyrus Moon; Saber Ghiassi, MD, FACS, MPH; Keith B Boone, MD; Kelvin Higa

Advanced Laparoscopic Surgery Associates¹

Background: We present a case of reversal of Roux-en-Y gastric bypass for chronically perforated marginal ulcer. **Methods:** The patient presents 11 years following open non-divided gastric bypass with a 6 year history of chronic non-healing perforated ulcer status post two surgical interventions, abdominal pain, and nausea. **Results:** She is taken to the

operating room for reversal, where a large inflammatory cavity is found and removed. The remainder of the reversal procedure proceeds without incident. She remained in house until postoperative day 6 for control of her chronic pain but was discharged after an uneventful hospital course.

Conclusions: Laparoscopic reversal of Roux-en-Y gastric bypass may safely be performed for chronic perforation of marginal ulcer without complications.

A-109-V

LAPAROSCOPIC REMNANT GASTRECTOMY AND RESECTION OF POUCH WITH ESOPHAGO-JEJUNOSTOMY FOR COMPLICATED GASTRO-GASTRIC FISTULA

Raul J Rosenthal, MD¹; Karan Bath, MD²; Yaniv Cozavov, MD²; Carlos M Esquivel, MD²; Emanuele Lo Menzo, MD PhD²
Cleveland Clinic of FL¹
CCF²

Background: Gastro-gastric fistulas are common complications of RYGB. This video illustrates a complex revisional procedure with esophagojejunostomy in a patient with gastro-gastric fistula and weight regain. **Methods:** A 67-year-old man underwent open RYGB and a revision of it approximately 20 years ago. He now presented with weight regain and gastro-gastric fistula. Both an UGI and EGD confirmed the presence of a gastro-gastric fistula. The patient underwent a laparoscopic revision. After exposure of the diaphragmatic crura, a hiatal hernia was noted and reduced. Area of the gastrogastic fistula is identified, and the gastric remnant, pouch and gastrojejunostomy were resected en bloc. The staple line of the gastric stump was oversewn. A side-to-side linear stapler esophagojejunostomy was then performed. **Results:** The recovery of the patient was uneventful, with a normal UGI on POD3. **Conclusions:** Revision of RYGB can involve resection of the gastric pouch as well as resection of the gastric remnant, and esophagojejunostomy may be necessary in some cases.

A-110-V

LAPAROSCOPIC MANAGEMENT OF TYPE 3 PARAESOPHAGEAL HERNIA IN THE SETTING OF MORBID OBESITY

Daniel Guerron-Cruz, MD¹; Kevin M El-Hayek, MD¹; John Rodriguez¹; Matthew D Kroh, MD¹; Bipan Chand, MD²

Background: There is an established increase in the incidence of paraesophageal hernia in the morbidly obese population. Standard fundoplication has shown increased failure rates. Laparoscopic Roux-en-Y gastric bypass at the time of paraesophageal hernia repair offers the advantage of addressing severe obesity and decreasing recurrence rate. **Methods:** We present the case of a 59-year-old female with a long-standing history of GERD and a BMI of 37. Imaging demonstrated a giant paraesophageal hernia. After initial evaluation she was referred to our multidisciplinary bariatric center for weight loss surgery at the time of the repair. **Surgical Technique:** The abdomen was entered using a 5-mm optical trocar. Other trocars were placed under direct vision in the left lower, right upper and right lower quadrant. The Nathanson retractor was placed the epigastric area. The peritoneum overlying the right pillar of the diaphragm was opened and dissected. The short gastric vessels were sequentially divided. The retroesophageal space was developed. The hiatus reconstruction consisted of three figure-of-eight #0 silk sutures and reinforcement with porcine dermis mesh. The gastric bypass started by constructing a gastric pouch with a linear stapler. A 150-cm Roux limb was then measured and a side-to-side jejunojejunostomy fashioned between the biliopancreatic limb and the common channel. The gastrojejunostomy was created with a 21-mm circular stapler. **Results:** The patient did well after surgery. Length of stay was 3 days. She has experienced satisfactory weight loss as well as improvement in her symptoms. **Conclusions:** Our approach offers: paraesophageal hernia reduction with mesh placement, parietal cell separation which prevents acid production, roux limb (100 cm) which prevents bile reflux and gastric bypass which provides a weight loss and reduces the risk of recurrence and comorbidities. This technique proves as a safe alternative for longer lasting prevention of gastroesophageal reflux.

A-111-V AN EXTREME CASE OF INTERNAL HERNIA THROUGH PETERSEN'S SPACE FOLLOWING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

Scott Cassie¹; Timothy D Jackson, MD¹; Todd Penner¹; Allan Okrainec, MD¹
University of Toronto¹

Background: A 47 year-old woman presented to the Emergency Department one year following laparoscopic Roux-en-Y gastric bypass. Following the procedure she had successfully lost 100 pounds. She presented with one week of intermittent, severe epigastric pain which was exacerbated by eating. A CT scan demonstrated subtle signs of a potential internal hernia. As her discomfort began to diminish, the patient attempted to leave hospital against medical advice, however was persuaded to undergo diagnostic laparoscopy. **Methods:** A diagnostic laparoscopy was performed in order to assess for potential internal hernia. **Results:** Upon entering the peritoneal cavity, a dilated segment of ischemic colon was immediately visible in the midportion of the abdomen, and the vast majority of small bowel appeared ischemic. Initial attempts to locate the terminal ileum were fraught with difficulty as the cecum could not be visualized in its' usual position in the right lower quadrant. By locating the distal transverse colon and running the bowel in retrograde fashion, the proximal ascending colon and cecum were seen deviating sharply towards the midline. It became apparent that they had herniated through Petersen's space. Initial attempts at reduction revealed a profoundly incarcerated cecum. With careful traction we reduced the cecum and the majority of the small bowel. The majority of the bowel was ischemic with multiple areas of punctate hemorrhage. The defect left at Petersen's space was closed with a silk stitch. The reduced bowel promptly displayed signs of improved perfusion, and no resection was required. The patient was given a clear fluids diet immediately postoperatively, and was advanced to a full diet on postoperative day one. She was subsequently discharged home on the first postoperative day, and was doing well at her four-week follow-up appointment. **Conclusions:** Internal hernias following Roux-en-Y gastric bypass are relatively common and may present with subtle radiologic findings. Failure to promptly identify and reduce the hernia may result in widespread bowel ischemia, which could have devastating consequences. Surgeons must maintain a high index of suspicion, and have a low threshold to perform diagnostic laparoscopy when an internal hernia is suspected.

A-112-V MISSED STAY SUTURE: A RARE CAUSE OF INTERNAL HERNIA AFTER LAPAROSCOPIC GASTRIC BYPASS

Vishnu K Bhartia, MBBS¹; Abhishek A Bhartia, MBBS,MRCS(UK)¹; Saumen Chakraborty, MS
NIL¹

Background: Internal Hernia is not an uncommon occurrence after laparoscopic Roux-en-Y gastric bypass (LRYGBP). Several causes of internal hernia

after LRYGBP have been identified namely, hernia through mesenteric defect, Peterson space hernia, or hernia due to adhesions. This particular case identifies hitherto unreported case of internal hernia caused by a stay suture placed at the jejuno-jejunosomy site. **Methods:** A case report is presented. A 54 year old male patient presented to us with a history of severe upper abdominal pain with intractable faeco-bilious vomiting of three days duration. He had undergone a LRYGBP elsewhere three months ago. Initial workup including CT scan was done which showed dilated gastric pouch and alimentary limb with obstruction around jejuno-jejunosomy. An urgent laparoscopy was performed. **Results:** On laparoscopy the enteric limb was dilated. On following this distally the Jejuno-jejunosomy was patent. Bilio-pancreatic limb was dilated. Proximal common channel was dilated which when followed was found to be obstructed just distal to jejuno-jejunosomy by a band. This band was the silk stay suture placed during the creation of jejuno-jejunosomy. The hernia had occurred between the distal staple line and the stay suture. The band was divided and obstruction was relieved. **Conclusions:** Small bowel obstruction post LRYGBP is not uncommon, though difficult to diagnose. In this case a forgotten stay suture placed at the time of creation of jejuno-jejunosomy was the cause of internal hernia. This stay suture is commonly placed before the staple firing to facilitate the introduction of stapler. However this is removed after completion of anastomosis. Bariatric patients develop potential hernia space due to rapid weight loss which was also the case in our patient, though at a rare site.

A-113-V

LAPAROSCOPIC CONTROL OF POST-GASTRIC BYPASS HEMORRHAGE FROM AN UNUSUAL SOURCE

Ajay K Chopra, MD¹; Aida Taye, MD¹; Victoria Lai, MD¹

Jacobi Medical Center¹

Background: The incidence of bleeding after laparoscopic Roux-en-Y gastric bypass (LRYGB) is between 1% and 4%. The bleeding can be intra-abdominal or intraluminal. The sites are staple lines on gastric pouch and excluded stomach; at gastro-jejunosomy and jejuno-jejunosomy. We present an unusual case of a post-operative LRYGB bleeding from left inferior phrenic artery. **Methods:** Our patient is a 44-year-old female with a BMI of 41.6 who presented for an elective LRYGB. She had a past

medical history notable for diabetes, obstructive sleep apnea and hypothyroidism. She had an uneventful LRYGB and was discharged on the third post-operative day tolerating liquid diet. However, two days after her discharge, she had sudden left-sided abdominal pain and became unresponsive at home. On arrival to the emergency room, she was hypotensive (70 mm Hg systolic) and diaphoretic. She had localized tenderness in the left upper quadrant. After adequate resuscitation, a CT scan was performed which showed presence of high density fluid on the left side of the abdomen. She was emergently brought to the operating room for an exploratory laparoscopy. **Results:** The patient was placed in a split leg position and previous port sites were reopened. Upon entry, we encountered large amount of blood and blood clots in the left upper quadrant. After suctioning, we are able to see an arterial bleed from the left inferior phrenic artery. We clamped the bleeding area with a locking grasper. A hemoclip was placed proximal to the bleeding site so as to stop the source of bleeding from the aorta. An attempt to place a hemoclip distal to the bleeding site proved inadequate. Thus an under-running suture of 3'0 vicryl was placed distally. We are then able to place a hemoclip distally. The patient did well post operatively and she was discharged on postoperative day three. **Conclusions:** This is the first reported case of phrenic artery bleed after a gastric bypass. The possible explanation for this event could be thermal injury caused by harmonic scalpel during the mobilization at the angle of His. The control of bleeding can be difficult as the vessel courses distally closely applied to the undersurface of the diaphragm. Using a back handed suturing technique, bleeding can be controlled from the distal side of the vessel.

A-114-V

LAPAROSCOPIC PPLICATION OF A GASTRIC POUCH AND HIATAL HERNIA REAPIR

Carlos A Galvani, MD¹; Julia Samame, MD²; Timothy Rankin, MD²

*University of Arizona Medical Center¹
University of Arizona²*

Background: Dilation of the gastric pouch and the gastrojejunal anastomosis may result in weight regain, following Roux-en-Y gastric bypass for morbid obesity. Significant weight gain has been reported in up to 25% of patients following gastric bypass and up to 12% of patients will required some type of revisional procedure following gastric bypass surgery due to weight gain or postoperative symptoms related

to stomal dilation. **Methods:** This is a 65-year-old female with weight regain, after a Gastric Bypass performed 6 years ago. At that time, her BMI was 38.3. Once she achieved a maximum weight loss of 100 pounds, she started to regain weight noticing that she could tolerate 8-12oz per portion in comparison to 3-4oz that she tolerated at the beginning. Her actual BMI was 30.8. An Upper GI demonstrated the presence of a sliding hiatal hernia as well as dilatation of the gastric pouch and the gastrojejunal anastomosis. A laparoscopic revision of her gastric bypass and a hiatal hernia repair was offered.

Results: The operative time was 175 minutes. The estimated blood loss was 10mL. No intra or perioperative complications were observed. The patient was discharged on postoperative day 1. After 3 months of follow-up the patient has lost 20 pounds.

Conclusions: Although gastric bypass is highly successful in the majority of patients, significant weight regain can occur over time due to stretching of the gastric pouch and stoma. Gastric plication as a revisional surgery of the gastric pouch is a safe and technically simple procedure.

Thursday, November 14, 2013
3:00 pm – 5:00 pm EST

Video Session C

A-115-V

TRANSGASTRIC EXTRACATION OF GASTRIC REMNANT FOLLOWING SLEEVE GASTRECTOMY

Peter Nau; Ozanan Meireles, MD

Background: Medical attempts at durable weight loss are fraught with failures secondary to durability and insignificant outcomes. Bariatric surgery promotes long-term weight loss and improvement of obesity-related comorbidities. The laparoscopic sleeve gastrectomy (LSG) is currently the fastest growing metabolic procedure in the world. Transabdominal extraction of the gastric remnant often necessitates dilation of a trocar site increasing post-operative pain and risk for hernia formation. **Methods:** Following induction of general anesthesia, the patient is placed in the supine, split-legged position. A five-port technique is utilized for creation of the gastric sleeve. A 1.2 cm, 36 French gastroscope is passed along the lesser curvature to aid in the sleeve creation. The initial staple line is oriented parallel to the incisura, leaving enough stomach behind for an additional staple line after stomach extraction. Having completed the gastric sleeve, the distal staple line is opened for specimen extraction. An assistant then passes a snare through the endoscope and into the peritoneal cavity. The specimen is then grasped, passed into the snare and removed through the gastrotomy. The abdomen is then desufflated and the incisions closed in a standard fashion. **Results:** This video documents a standard approach to the extraction of the remnant stomach in patients with robust fascia in whom transabdominal extraction would be impossible outside of enlarging the defect in the abdominal wall. **Conclusions:** Obesity has become a problem of epidemic proportions in westernized societies. The LSG is rapidly becoming one of the most common bariatric surgical procedures performed. The transgastric extraction of the gastric remnant provides for a safe method for specimen extraction in those patients who would be exposed to increased post-operative pain and hernia formation secondary to port site enlargement.

A-116-V

LAPAROSCOPIC TAKE DOWN OF NISSEN FUNDOPLICATION AND CONVERSION TO SLEEVE GASTRECTOMY

Ajay K Chopra, MD¹; Jayne A Lieb, MD¹
Jacobi Medical Center¹

Background: Bariatric surgery after a previous Nissen fundoplication is technically difficult and carries a higher complication rate. Few case series have published technical feasibility and outcomes of conversion to gastric bypass 1, 2. We describe technical steps in the performance of fundoplication takedown and conversion to a sleeve gastrectomy for weight loss. **Methods:** Our patient is 48 years old female who underwent a Laparoscopic Nissen fundoplication and hiatal hernia repair for reflux symptoms. She was 230 lbs. with a height of 5' 11" (BMI 43.5). She refused bariatric surgery at this time. Two years subsequently patient had gained weight and was 274 lbs. (BMI 52 Kg/M²). She requested bariatric surgery and opted for sleeve gastrectomy. She was explained about recurrence of reflux symptoms and further need for a gastric bypass in future. **Results:** Laparoscopic exploration revealed limited abdominal space with a large liver and extensive adhesions of the wrap to the undersurface of the liver. She had a narrow costal margin only allowing placement of a smaller sized Nathanson liver retractor. The wrap was mobilized off the liver and the diaphragm and the right side of the wrap was mobilized underneath the esophagus and brought to its normal anatomical location. Gastric sleeve was then constructed around a 34 F stomach tube. Green cartridge with absorbable staple line reinforcement was utilized. Patient did well postoperatively and was discharged on postoperative day 2. At 6 months follow up she has lost 54 lbs. She has mild reflux symptoms which are managed well with medications. **Conclusions:** This video demonstrates the technique of fundoplication take down and sleeve procedure in the face of limited intra-abdominal space and dense adhesions. With attention to detail and identification of anatomical landmarks this operation can be performed successfully.

A-117-V

LAPAROSCOPIC IMBRICATION OF SLEEVE GASTRECTOMY FOR WEIGHT REGAIN AND REPAIR OF HIATAL HERNIA

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Background: 53 year old female status post sleeve gastrectomy had issues with gastroesophageal reflux and weight regain. Patient had an upper GI study that revealed an approximately 4 cm hiatal hernia with reflux and a dilated sleeve. **Methods:** Veress needle was inserted in the left upper quadrant, the abdomen was insufflated, and six trocars were inserted. Visualization of the abdominal cavity revealed extensive adhesions in right upper quadrant and pelvic area. Left lobe of the liver was retracted anteriorly. Adhesions to the stomach were taken down. All the adhesions around the crura were released and the peritoneum over the right crura was incised and dissected, the hiatal hernia was reduced. The esophagus was freed from all the adhesions. The hiatus behind the esophagus was repaired with 2 interrupted stitch with 2-0 Ethibond. The stomach was imbricated on top of the Edlich tube with interrupted stitch of 2-0 Ethibond and also a running stitch of 2-0 Ethibond. **Results:** Postoperatively the patient did well, UGI and methylene blue test were negative on POD # 1, and she went home on POD # 2 on full liquid diet. Patient showed a drop of 10.4 kg at a 6 month follow up. **Conclusions:** Sleeve gastrectomy creates a high pressure system that can make GERD unbearable for patients with hiatal hernia and incompetent lower esophageal sphincters. Plication of the sleeve can be an option for weight regain due to dilated sleeve.

A-118-V

LAPAROSCOPIC ENUCLEATION OF LEIOMYOMA OF THE ESOPHAGEAL JUNCTION DURING SLEEVE GASTRECTOMY

Raul J Rosenthal, MD¹; Abraham Betancourt, MD; Fernando FD Dip, MD; Jessica Ardila-Gatas, MD; Emanuele Lo Menzo, MD PhD²
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*Cleveland Clinic Florida*²

Background: The incidence of incidental pathology found during laparoscopic bariatric surgery has been estimated to be around 2%. We discuss one case of a gastric mesenchymal tumor incidentally discovered during the preoperative work up for a laparoscopic sleeve gastrectomy and resected at the time of the bariatric operation. **Methods:** A 41-year-old male with a BMI 40.5, hypertension, diabetes, and sleep apnea, who was found to have a submucosal lesion on EGD during preoperative evaluation for sleeve gastrectomy. Upper GI series showed a small, non-circumferential mass at the gastroesophageal (GE)

junction. Trans-esophageal ultrasound demonstrated an irregular, lobulated, hypoechoic, 1cm x 2cm mass that extended into the serosa. The abdominal cavity was approached by a seven trocar laparoscopic technique. A window behind the esophagus was dissected. After the identification of a prominent area, where the tumor was previously described, a mass was enucleated using ultrasonic energy without violation of esophageal mucosa. The seromyotomy was closed with a double layer of running vicryl suture. Intra-operative endoscopy verified the patency of GE junction and an intact mucosa. With the endoscope advanced to the pylorus, a sleeve gastrectomy was performed. **Results:** Patient was discharged home on postoperative day two, tolerating clear liquid diet. No complications were observed. Pathology results reported gastric leiomyoma. **Conclusions:** Preoperative Upper GI and EGD might reveal incidental tumors before bariatric surgery. Concurrent tumor enucleation and sleeve gastrectomy is technically doable and safe.

A-119-V

GASTRIC TORSION AFTER SLEEVE GASTRECTOMY: A RARE COMPLICATION TREATED WITH ROBOTIC GASTROPLASTY.

Jonathan K Arad, MD¹; Rey J Romero, MD¹; Anthony M Gonzalez, MD, FASC, FAMBS¹
*Baptist Health South Florida*¹

Background: The popularity of Sleeve Gastrectomy (SG), as a treatment for morbid obesity, has increased recently, due to its safety and relatively technical simplicity when compared with gastric bypass. However, due to the increased number of cases performed it would be expected to experience new postoperative complications. The purpose of this video is to report a patient who presented with a partial gastric obstruction after SG and the treatment employed. **Methods:** This is a 39-year-old African-American female (BMI 45) with no remarkable medical history, who underwent laparoscopic-robotic assisted SG 3 months prior. Postoperatively she presented with intermittent nausea, bloating and vomiting. UGI revealed a partial obstruction of the sleeve. The patient was taken to the OR for diagnostic laparoscopy, where it was noticed that the sleeve was torsed. A gastroplasty in the manner of Heineke-Mikulicz pyloroplasty was performed. A 7 cm longitudinal incision was created at the level of the torsion. The incision was closed transversely with interrupted absorbable sutures in two layers. EGD

demonstrated the area to be patent. **Results:** Surgical time was 170 minutes. The patient had an UGI 36 hours after surgery which revealed no obstruction or leaks. She subsequently progressed to clear liquids and then a full liquid diet. **Conclusions:** The sleeve gastrectomy has been adopted by many due to its excellent weight loss results and simplicity of procedure. Though simple, it has been noticed that when complications occur, their management may be complex and require endoluminal and surgical interventions. We present here a video showing the use of robotic technology to correct a torsion of the sleeve without conversion to gastric bypass.

A-120-V ROBOTIC ESOPHAGO-GASTRECTOMY DUE TO CHRONIC GASTRO-PLEURAL FISTULA SECONDARY TO SLEEVE GASTRECTOMY LEAK: BENEFITS OF THE ROBOTIC PLATFORM.

Rey J Romero, MD¹; Radomir Kosanovic, MD¹;
Anthony M Gonzalez, MD, FASC, FAMBS¹
*Baptist Health South Florida*¹

Background: Leaks and fistulas after sleeve gastrectomy (SG) are considered complications difficult to treat caused by local tissue ischemia combined with increased intraluminal pressure of the sleeve. Conversely, gastro-pleural fistulas are related to traumatic and post-surgical events and require a complex management strategy. Therefore, this combination of a sleeve fistula into the pleural cavity and lung create an undesirable combination and difficult surgical management. We present a case of a gastro-pleural fistula after SG managed surgically with the use of the robotic platform. **Methods:** This is a 24-year-old female patient with no known past medical history, who underwent a sleeve gastrectomy 11 months prior. Her postoperative course was complicated by a leak managed with multiple stents. However she presented at our facility with persistent leak. CT scan and upper endoscopy showed a partial dehiscence of the staple line at the esophago-gastric junction, with gastro-pleural fistula. Initially she was treated with bowel rest and parenteral nutrition. When medical therapy failed again, the decision was made to perform a robotic esophago-gastrectomy, resection of the gastropleural fistula, Roux-en-Y esophago-jejunosotomy, hiatal hernia repair and G-tube placement. **Results:** At the time of this submission, the patient's recovery was uneventful. An UGI on postoperative day 4 demonstrated no leak or obstruction. She was tolerating both oral and enteral

nutrition via G-tube. **Conclusions:** The true benefit of robotic surgery is believed to become evident when being used for complex cases (i.e. revisional bariatric cases). Numerous advantages have been demonstrated with addition of robotic surgery. These benefits have allowed the implementation of robotic surgery into new areas. We present here a video report of a robotic esophago-gastrectomy with resection of a gastropleural fistula and robotic Roux-en-Y esophagojejunosotomy

A-121-V T TUBE GASTROSTOMY AS TREATMENT MODALITY FOR MUCOSAL DISRUPTION AFTER SEROMYOTOMY FOR STRICTURED SLEEVE GASTRECTOMY

Raul J Rosenthal, MD¹; Yaniv Cozacov, MD²; Adam H Beall, MD²; Carolina Ampudia, MD²; Emanuele Lo Menzo, MD PhD²; Samuel Szomstein, MD²
*Cleveland Clinic of FL*¹
*CCF*²

Background: Seromyotomy is an acceptable treatment modality for patients presenting with gastric stricture after laparoscopic sleeve gastrectomy. **Methods:** A 53 years old patient status-post sleeve gastrectomy at an outside institution 18 months prior presents with signs and symptoms of nausea and vomiting, GERD and aspiration pneumonia, having him maintain a constant upright posture. An EGD shows a patent gastric sleeve, but an UGI describes a strictured segment of the mid portion of the stomach. Patient verbalizes that under no circumstances does he want a RYGB, even though it may be the only available appropriate course of action. Using Harmonic Scalpel, and staying 2-3 cm medial to the staple line a seromyotomy reaching out distal to the incisura angularis up to the GE junction. Intraoperative EGD is performed showing intact mucosa and patent sleeve lumen. Omentum is mobilized to cover the area. Seven days postoperatively the patient presents to the ER with 48 hrs. history of abdominal pain, nausea, vomiting, fever, leukocytosis and anorexia. The abdomen is distended and tender in the epigastric and periumbilical areas. Guarding is also present. A CT Scan of the abdomen with gastrografin performed on admission, showed extravasation of contrast material, stranding around the stomach and free air in the peritoneal cavity. The patient was taken for an exploratory laparoscopy, and after debridement, a gastrostomy T-tube and feeding jejunostomy were left in place. **Results:** The recovery course for seromyotomy performed due to strictured sleeve gastrectomy was complicated 4 days after the patient was discharged by an acute leak at the mid-portion of the stomach. Debridement and gastrostomy T-tube were under pursuit for controlling the leak, and a feeding jejunostomy was placed for nutritional

support. **Conclusions:** Mucosal disruption should be a feared complication in patients undergoing seromyotomy for persistent strictures. T Tube gastrostomy should be considered as a potential treatment modality.

A-122-V

LAPAROSCOPIC SLEEVE GASTRECTOMY AFTER AN ABORTED GASTRIC BAND PLACEMENT: AN UNEXPECTED ENCOUNTER

Ajay K Chopra, MD¹; Jayne A Lieb, MD¹
Jacobi Medical Center¹

Background: Reoperative bariatric surgery has been shown to be feasible but associated with higher morbidity. Laparoscopic sleeve gastrectomy and Roux En Y gastric bypass have been carried out after a failed gastric band and vertical banded gastroplasty. These procedures are technically challenging but can be safely performed with due diligence to detail. We present this video which highlights the operative steps in a patient with extreme central obesity that had a frozen upper abdomen resulting from a failed attempt at placement of an adjustable gastric band.

Methods: The patient was a 63 years old, male with BMI of 42.7 Kg/M² (271 lbs., 5' 7") and medical history significant for Type 2 diabetes, hypertension, dyslipidemia and asthma. An attempt at an adjustable gastric band placement was unsuccessful secondary to limited intra-abdominal space due to extensive visceral fat and a large liver. After about two months, he was scheduled for a laparoscopic sleeve gastrectomy. **Results:** On entering the abdomen we saw dense adhesions between the liver and proximal stomach. There was a large omental phlegmon adherent to the lateral abdominal wall limiting the space further. A combination of blunt and sharp dissection was used to achieve mobilization of the stomach from the liver undersurface. The greater curvature of the stomach adhesions to the medial surface of spleen were divided with scissors. We used green load cartridge with use of absorbable staple line reinforcement for the construction of sleeve around a 34 F stomach tube. Patient did well postoperatively and was discharged on postoperative day 2 tolerating liquid diet. **Conclusions:** This video illustrates the technical details of a difficult sleeve gastrectomy in the face of dense adhesions. Despite limited space and scarring the sleeve procedure is still feasible with attention to identifying anatomical land marks and using appropriate technique.

Thursday, November 14, 2013
3:00 pm – 5:00 pm EST

Icahn Mount Sinai School of Medicine¹
Mount Sinai School of Medicine²

Video Session D

A-123-V

LAPAROSCOPIC REVERSAL OF VERTICAL BANDED GASTROPLASTY

Nathan Lytle¹; Juan P Toro, MD¹; Ankit Patel, MD¹;
Jahnvi Srinivasan, MD¹; John F Sweeney, MD¹;
Scott Davis¹; Edward Lin, DO¹
*Emory University*¹

Background: Revisional surgery for prior bariatric procedures can be a challenging operation. Though vertical banded gastroplasty is not currently a common option for weight loss surgery, patients with this procedure may need surgical consultation for complications. This video presents a laparoscopic approach for reversal of a vertical banded gastroplasty that is causing dysphagia. The patient had the VBG 23 years prior and has needed multiple EGD's to disimpact food. She was unable to take enough by mouth, therefore was receiving TPN at home. This procedure uses the aid of an endoscope and transgastric stapling to reconnect the gastric pouch to the rest of the stomach. **Methods:** This procedure was performed for a patient with the main complaint of dysphagia. The pt received pre-operative EGD and upper GI series to define the anatomy. Once the diagnosis of stenosis from the band was made, the patient was taken to the OR. Endoscopic evaluation was first performed, followed by endoscopically guided gastrostomy. Laparoscopic staplers were then used to divide the band transgastrically. This reconnected the gastric pouch to the rest of the stomach, and resolved the patient's dysphagia. **Results:** Post-operative upper GI series shows resolution of the stenosis and much improved emptying of the stomach. The patient's symptoms resolved and she was able to maintain her nutrition without the need for home TPN on follow-up. **Conclusions:** The procedure shown in the video is a safe and reliable option for reversal of a vertical banded gastroplasty.

A-124-V

TOTAL ENDOSCOPIC REMOVAL OF AN ERODED LAPAROSCOPIC GASTRIC BAND WITH A LITHOTRIPSY OVERTUBE

Andrew S Wu, MD¹; Brian P Jacob, MD²

Background: Adjustable gastric banding is an effective surgical treatment for morbid obesity with the benefits of being a relatively simple, reversible, and anatomically preserving procedure. Despite these advantages, gastric banding has come into question due to various complications associated with the procedure of which the most feared is erosion of the gastric band through the stomach wall with a frequency of 1-3% of cases. We present a case of a totally endoscopic removal of a partially eroded laparoscopic adjustable gastric band with a lithotripsy overtube. **Methods:** Our case involves a 23 year old female with morbid obesity and a BMI of 42 who underwent placement of an adjustable gastric band placed laparoscopically who 8 months later had a diagnostic upper endoscopy for persistent abdominal pain revealing a partial erosion with intragastric migration of her gastric band. The patient was subsequently scheduled in the operating room for endoscopic removal of her gastric band. **Results:** The case was performed with a double channel therapeutic endoscope, and the band was successfully removed with the aid of a mechanical lithotripsy overtube performed completely via endoscopy. **Conclusions:** This case demonstrates the effective and safe endoscopic removal of a partially eroded gastric lapband thus avoiding the need for surgery. Published case series using various endoscopic techniques have shown a removal success rate of 87-92% in carefully selected patients. Further consideration should be given to this technique as it is safe, effective, and minimally invasive with the caveat that early experiences with these cases should be performed in the operating room and with the presence of a bariatric surgeon in case joint laparoscopic removal needs to be performed and to ensure complete removal of the device and help manage any potential complications.

A-125-V

LAPAROSCOPIC CONVERSION OF A VERTICAL BANDED GASTROPLASTY TO SLEEVE GASTRECTOMY WITH HAND SEWN GASTRO-GASTROSTOMY

Gurdeep S Matharoo, MD¹; Frank J Borao, MD,
FACS; Anthony Squillaro; Steven J Binenbaum, MD,
FACS

*Monmouth Medical Center*¹

Background: The Mason vertical banded gastroplasty (VBG) was first performed by Mason in 1980 and quickly became the gold-standard operation for morbid obesity. The complications and failures of VBG coupled with emergence of newer surgical techniques pushed vertical banded gastroplasty out of favor among patients and bariatric surgeons. Contemporary surgeons with VBG patients presenting for revision or reversal have a myriad of surgical techniques to offer. We present technique for revisional surgery in a 56 year old woman with a stricture after an open Mason VBG performed in 1991. **Methods:** The video demonstrates laparoscopic conversion of VBG to sleeve gastrectomy (SG). The stomach is divided transversely at the incisura, distal to the mesh band. We then divide the stomach transversely from the lesser curvature proximal to the band. This proximal staple line is then turned toward the angle of His to create a sleeve over a 36-french bougie dilator. A two-layer hand-sewn gastric anastomosis is created over the 36-french bougie dilator. The anastomosis is sealed with fibrin glue. A Jackson-Pratt drain is left in the subphrenic space. An upper GI study is performed on post-operative day two. **Results:** The case was completed laparoscopically with four 5-mm trocars and one 12-mm trocar. The operative time was six hours and twenty-three minutes. Estimated blood loss was 400 mL and 4000 mL of crystalloid was administered during the procedure. There were no intraoperative complications. The post-operative course has been unremarkable. On post-operative day two an upper GI study showed free antegrade flow of contrast without obstruction or leak. The patient tolerated a bariatric diet and was discharged home on post-operative day four. Preoperative complaints of abdominal pain and dysphagia had resolved prior to discharge. All five ports sites healed well. **Conclusions:** Vertical banded gastroplasty is no longer a preferred procedure for weight loss. Many of today's surgeons have not performed a VBG however are requested to care for patients with complications from VBG. We demonstrated a laparoscopic conversion of a Mason type VBG to a SG. Previous authors have described conversion of VBG to roux-en-y gastric bypass. Our technique does not involve a change in intestinal anatomy as required by gastric bypass. In previously described conversions to SG the mesh band was divided but not removed. Our technique offers the benefits of removing a foreign body.

A-126-V

LAPAROSCOPIC REVISION OF ADJUSTABLE GASTRIC BAND TO A SLEEVE GASTRECTOMY

John A Primomo, MD; Garth P Davis, MD; Robert Davis, MD

Background: Revisional surgery of prior placed laparoscopic adjustable gastric bands is increasing. Operative techniques in approaching revision of the laparoscopic band have not been well defined. This video submission demonstrates an operative approach in revising a prior lap band to a sleeve gastrectomy. **Methods:** A 43 year old female with a Body Mass Index of 42 and prior history of laparoscopic adjustable gastric band placement in 2010 presented with a history of weight regain along with a prior history of a slipped band that had resolved with decompression of the band. Decision was made to revise her prior band to a sleeve gastrectomy. **Results:** The band port was removed in an open fashion. Patient was approached laparoscopically with identification of the band and tubing. Medial takedown of the gastrohepatic and band adhesions was performed until clear identification of the caudate lobe. The overlying and underlying scar tissue of the buckle was divided. The gastro-gastric plication was taken down with clear identification. The band was unbuckled and removed with dissection continued for full mobilization of the stomach off of the left crus of the diaphragm. The underlying scar tissue was divided to assure relief of the prior gastric outlet obstruction. A sleeve gastrectomy was performed over a 38 French bougie. **Conclusions:** A stepwise approach to removal of a prior placed lap band is essential to revisional surgery to a sleeve gastrectomy. Full takedown of adhesions and the prior gastro-gastric plication is helpful. Division of the underlying scar tissue relieves the gastric outlet obstruction. Full mobilization of the stomach off the left crus assures that the proximal staple line is across healthy tissue.

A-127-V

LAPAROSCOPIC REVERSAL OF ROUX-EN-Y GASTRIC BYPASS INTO SLEEVE GASTRECTOMY: EVOLUTION OF THE TECHNIQUE

Jacques M Himpens, MD, PhD; Ramon Vilallonga, MD PhD¹

AZ St Blasius, Dendermonde¹

Background: Some long term complications after laparoscopic Roux-en-Y gastric bypass (LRYGB),

such as hypoglycemic syndrome, weight regain, severe dumping and cachexia may be treated by reversal to normal anatomy (NA). A sleeve gastrectomy (SG) may be performed during the same procedure to avoid weight regain. We herein describe the evolution of the technique of SG after NA, based on 10 consecutive cases. **Methods:** In all patients, a 5 trocar technique was used. Complete reversal to normal anatomy was achieved. At conclusion of the procedure, SG was performed. A 34 French bougie was used in all cases. In the first 5 patients, a typical SG was performed, including complete devascularization of the greater curvature and subsequent stapled resection. In the last 5 patients, devascularization and resection was limited to the proximal part of the fundus, ending distally at the level of the former horizontal staple line. The more distal part was not devascularized nor resected, but rather plicated, using two rows of resorbable sutures. **Results:** From January 2005 to October 2012, 10 female patients who had undergone RYGB underwent laparoscopic reversal to NA and simultaneous SG. The video highlights the technique change used in the last 5 patients. Three of the first 5 patients (60%), who underwent "typical" SG at the time of reversal, developed a leak. Conversely, none of the last 5 patients suffered a complication. **Conclusions:** Adapting the technique of SG by including a distal plication rather than a typical resection might help avoiding the complications encountered with typical SG during NA. Ischemic issues might be avoided by the new technique.

A-128-V

GASTRIC PPLICATION TO GASTRIC BYPASS: REVERSAL AND REVISIONAL TECHNIQUE

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Cleveland Clinic¹

Background: Gastric plication is an investigational restrictive procedure designed to achieve weight loss by reducing gastric volume without the use of stapling or banding. Revisional options after plication have not yet been well explored. In this video, we demonstrate the technical feasibility of laparoscopic reversal of gastric plications followed by conversion to Roux-en-Y gastric bypass. **Methods:** In gastric plication, the stomach is infolded to establish serosa-to-serosa apposition and gastric restriction. Our initial plication trial included greater curvature plication and an anterior plication. In the greater curvature plication, a

lateral intraluminal gastric fold is created; the anterior plication involves folding the anterior gastric wall inward from the fundus to the antrum. The laparoscopic technique of reversing both these plications to normal stomach anatomy prior to conversion to gastric bypass in two patients is demonstrated. **Results:** Both the greater curvature plication and the anterior gastric plication were successfully reversed laparoscopically and converted to Roux-en-Y gastric bypass. A stapled gastrojejunal anastomosis was completed with a final 150cm antecolic, antegastric Roux limb, a 50cm biliopancreatic limb and a 30mL gastric pouch in both cases. Both patients had an uneventful postoperative course. **Conclusions:** Laparoscopic reversal of gastric plication is technically feasible and is an essential step prior to creation of the gastric pouch for revision to gastric bypass. Conversion to Roux-en-Y gastric bypass is an optimal choice for patients who have suboptimal weight loss or long-term weight gain after a plication procedure.

A-129-V

LAPAROSCOPIC REVISION OF A HORIZONTAL GASTROPLASTY TO A ROUX-EN-Y GASTRIC BYPASS WITH A SUBTOTAL GASTRECTOMY

John A Primomo, MD; Garth P Davis, MD, Robert Davis, MD

Background: The Horizontal Gastroplasty was developed in the 1970's as a restrictive bariatric surgical option, however, was found to have poor long-term weight loss results. Patients in addition to weight regain would occasionally develop dysphagia from a gastric outlet obstruction secondary to the horizontal staple line. Revision to a Roux-en-Y Gastric Bypass poses challenges in regards to, takedown of the prior adhesions, proper identification of the anatomy and performing a gastro-jejunostomy remote from the adhesive tissue. This video presents the intra-operative techniques for gastrohepatic adhesiolysis, identification of the prior staple line anatomy, and conversion to a Roux-en-Y Gastric Bypass. **Methods:** A 46 year old male with a Body Mass Index (BMI) of 65 presented with complaints of dysphagia and weight regain following an open Horizontal Gastroplasty performed in 1984 Upper Endoscopy and Upper GI confirmed horizontal gastroplasty anatomy. Upper endoscopy demonstrated esophagitis with biopsies negative for Barrett's esophagus. Decision was made to pursue a laparoscopic conversion to a Roux-en-Y gastric bypass with a subtotal gastrectomy. Subtotal gastrectomy was performed to establish a stable line across viable gastric tissue remote from the prior

stable lines and adhesive tissue. **Results:** Patient was approached laparoscopically. Dense adhesions were taken down. Medial dissection of the gastrohepatic adhesions was performed until clear identification of the caudate lobe at which time a medial to anterior to lateral approach was performed to takedown the remainder of the gastrohepatic adhesions. Following takedown of the adhesions the staple line was clearly identified and formation of the new gastric pouch was performed over a 34 French bougie. A subtotal gastrectomy was performed to assure the gastric remnant staple line was across viable tissue. The Roux limb was measured to 120cm and both the jejunjejunostomy and gastrojejunostomy were formed in a linear handsewn fashion. An intra-operative endoscopy was negative for leak. Patients post-operative course was uneventful with an Upper GI being negative on post-operative day 1 and discharge on post-operative day 2 on a full liquid diet. Two month follow up demonstrated that the patient was tolerating a regular diet and had a decreased BMI to 60. **Conclusions:** In performing revisional bariatric surgery it is beneficial to approach the gastrohepatic adhesions in a medial to lateral fashion. This affords clearer identification of the adhesive plane. In addition proper identification of the anatomy and prior staple lines is required before forming the gastric pouch. The addition of a subtotal gastrectomy allows for a staple line across viable tissue remote from the prior surgical staple lines and adhesive process.

**Thursday, November 14, 2013
8:00 am – 10:00 EST**

**Oral Presentations: Integrated Health
Scientific Sessions**

A-101-IH

**PREDICTIVE VALUE OF PULSE RATE TO
DETERMINE THE RISK OF LEAK IN THE
EARLY POST OPERATIVE PERIOD AFTER
A LAPAROSCOPIC ROUX EN Y GASTRIC
BYPASS.**

Adrien Sterkers; Robert Caiazzo, MD; Khaled Amhad; Fanelly Torres; Helene Verkindt; Marie Pygere; Bernard Leroy; Gilles Lebuffe; Francois Pattou, MD¹
UL2¹

Background: Postoperative peritonitis is the main cause of mortality after Laparoscopic Roux en Y Gastric Bypass (LRYGBP). Early diagnosis is of utmost importance for appropriate management. In this study we identified in a retrospective cohort parameters that best predicted peritonitis at day one post LRYGBP and secondarily validated these parameters in a prospective study. **Methods:** First, we analyzed in a case control study the early postoperative outcome of 402 LRYGBP operated between January 2004 and May 2009 and identified the best predictors of postoperative peritonitis. Second, the best predictors were prospectively used in a validation cohort of 351 patients submitted to LRYGBP from June 2009 to Sept 2012 to indicate early reoperation. **Results:** Overall 31 patients (4%) developed an early peritonitis after LRYGBP. No death was observed. In the retrospective cohort, the 24 patients (6%) experienced peritonitis; they had higher pulse rate ($p < 0.001$), lower urine output ($p = 0.003$), higher oxygen consumption ($p < 0.001$), and more frequent abnormal upper GI series ($p < 0.001$) at postoperative day 1 (POD1). In multivariate analysis upper GI series and pulse rate were the only independent predictors of peritonitis ($p < 0.001$). The ROC curve analysis of pulse rate (AUC = 0.90) identified two distinct values: a pulse rate above 100 beats per mn (bpm) had a negative predictive value of 0.99 and a sensitivity of 0.86, vs.. 0.96 and 0.37, respectively, for abnormal upper GI series. A pulse rate over 120 bpm had a specificity of 0.99 and a predictive value of 0.70. During the prospective study, indication for reoperation was based on these two parameters. Seven patients (2.5%) had peritonitis. All had a pulse rate at POD1

above 100 bpm (sensitivity 100%). Among three patients with a pulse rate over 120 bpm, two had peritonitis at reoperation. **Conclusions:** The early diagnosis of peritonitis is essential after LRYGBP. In this context, tachycardia at POD1 is the best diagnostic criterion to suspect peritonitis and decide laparoscopic reexploration for early diagnosis and treatment.

A-102-IH

**PREDICTORS OF HOSPITAL LENGTH-OF-
STAY AFTER LAPAROSCOPIC GASTRIC
BYPASS: AN ANALYSIS OF 9,593
PATIENTS FROM NATIONAL SURGICAL
QUALITY IMPROVEMENT PROGRAM**

Jonathan T Carter, MD¹; Steven Elliott, MD¹; Jennifer Kaplan, MD¹; Christina M Spina, PA-C MPH¹; Matthew Y Lin, MD¹; Andrew Posselt, MD, PhD¹; John P Cello, MD¹; Stanley Rogers, MD¹
UCSF Dept of Surgery¹

Background: Bariatric centers face increased pressure to reduce hospitalization as a means to contain costs, and some centers have sought to develop "fast-track" protocols. There is limited data to identify patients who require a longer hospital stay after gastric bypass, and therefore would be inappropriate for fast-tracking. **Methods:** We reviewed all laparoscopic gastric bypass (LGB) procedures reported to NSQIP over one calendar year. Revision and open procedures were excluded. Patient and procedural characteristics, length of stay, readmissions, and 30-day morbidity and mortality were reviewed. Predictors of longer hospitalization (defined as > 3 days) were identified by multivariate analysis. **Results:** Of 9,593 LGBs, median length of stay (LOS) was 2 days (range 0-544) and 27% of patients required 3 or more days of hospitalization. In multivariate analysis, longer hospital length-of-stay was predicted by race, diabetes, COPD, bleeding diathesis, renal insufficiency, hypoalbuminemia, prolonged OR time, and trainee involvement with the procedure (see Table). Patient BMI, age, sex, and other comorbidities did not predict the need for a longer hospitalization. **Conclusions:** Patient characteristics and operative details predict length of hospitalization after laparoscopic gastric bypass. Such data can be used to identify patients inappropriate for fast-track protocols.

A-103-IH

REDUCTION OF 30-DAY READMISSION RATES THROUGH THE USE OF A DISCHARGE PROTOCOL

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Florida Hospital Celebration Health¹

Background: Hospital readmissions following bariatric surgeries are costly. Many readmissions are avoidable, particularly those associated with general malaise. We have recently developed a discharge protocol in an effort to reduce complications and associated readmissions. The purpose of the study was to compare readmission rates and underlying causes before and after initiation of the protocol.

Methods: The discharge protocol includes: 1) a required discharge check list of specific criteria involving pain, nausea, liquid consumption, respiratory status, and 2) a telephone interview by the nurse coordinator following discharge for discussion of physical and mental issues, medications, and the postoperative regimen. Readmission rates (30-day) were examined the year prior to (2011) and following (2012) initiation of the protocol along with causes for readmissions categorized as “technical” (leaks, bleeding, organ injury), “medical” issues (infection, stenosis, ulcer, deep vein thrombosis, pulmonary emboli, strangulated hernia, more), or general “malaise” (nausea, vomiting, dehydration, weakness, benign abdominal pain). **Results:** The year prior to employment of the discharge protocol, our 30-day readmission rates for all bariatric procedures (n=449) averaged 9.8%. The 30-day readmission rate was 0% for “technical” complications, 3.3% for conditions categorized as “medical”, and 6.5% for issues involving general malaise. For the year following initiation of the protocol and with 470 procedures, the 30-day readmission rate declined significantly to 5.2%. The readmission rate for “technical” complications was 0.2%, for “medical” was 2.1%, and for “malaise” was 2.9%. The greatest change in the readmission rates with the discharge protocol were those categorized as general malaise. Readmission rates for general malaise for all surgeries declined by 55% and by a respective 54%, 40%, and 100% for the Roux-en-Y gastric bypass, the sleeve gastrectomy, and the adjustable gastric band. **Conclusions:** Hospital readmission rates following bariatric surgeries, particularly readmissions involving general malaise, can be significantly improved through the routine use of a discharge protocol.

A-104-IH

INCIDENCE OF SYMPTOMATIC HYPOGLYCAEMIA AT 5 YEARS AFTER ROUX-EN-Y GASTRIC BYPASS (RYGB) ASSESSED BY A QUESTIONARY SCORING SYSTEM.

Ronald Kefurt, MD; Gerhard Prager, MD; Felix B. Langer, MD; Soheila Shakeri-Leidenmuehler, MD; Bernhard Ludvik; Astrid Hofer; Karin Schindler, PhD; Adrian Tuerkcan; Christine Reiler, MD

Background: Vertigo, attack of sweating, daze, tachycardia and loss of concentration are some of the various unspecific symptoms of hypoglycemia after RYGB. In this study we screened gastric bypass patients for symptomatic hypoglycemia using a questionnaire scoring system. **Methods:** 51 patients (46 female, 5 male, mean age 40± 3,4 years , mean BMI 31,8 ± 1,7 kg/m²) at median 93 months (60-96) after gastric bypass performed between 2005 and 2007. were included in this study. The patients had to fill out a questionnaire addressing hypoglycemia symptoms as vertigo, attack of sweating, daze, weakness, loss of concentration, shivering, tachycardia, fatigue, hunger, headache and loss of concentration by a numeric scoring system . A minimum score of 9 (no symptoms) up to a maximum score of 84 (strong symptoms) could be reached. A score above the level of 42 was considered as symptomatic. A 5 days continuous glucose monitoring (CGM) was used for validation. **Results:** By this scoring system, 25,5% of the patients (n=13) were assessed to suffer from symptomatic hypoglycemia while 60,5% of the patients (n=31) were defined to be asymptomatic. 14% (n=7) of the patients were excluded due to insufficient completion of the questionnaire. All of the patients scored for symptomatic hypoglycemia also showed hypoglycemic episodes at the CGM. Nevertheless, in 70% of the asymptomatic patients, GCM also revealed hypoglycemic episodes. **Conclusions:** This questionnaire scoring system focusing on symptoms of hypoglycemia had a 100% specificity to diagnose hypoglycemia in RYGB patients but a sensitivity of only 30%.

A-105-IH DOES BARIATRIC SURGERY IN ADOLESCENTS HAVE SIMILAR OUTCOMES AS IN ADULT PATIENTS? A CASE CONTROL STUDY

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Background: A high rate of morbid obesity in the youth population has led to an expanded usage of bariatric surgery in adolescents. Results of bariatric surgery in juvenile patients may be different than in the adult population, since both, physical and psychological characteristics related with their age may impact the outcomes. The aim of our study is to comparatively analyze results of bariatric surgery, during the 1st postoperative year, in adolescents and adults, using a case-control design. **Methods:** From a prospectively constructed database adolescent patients who underwent bariatric surgery between 2005 and 2012 and completed at least 1-year follow-up were selected. Two adult controls for each case were matched according to gender, BMI, and year of surgery. Demographics, surgical details, weight loss, and changes in body composition were comparatively analyzed. **Results:** There were 29 adolescents, 12 males and 17 females with a mean age of 19.3±1.5 years, and a mean BMI of 43.4 Å± 6.7 Kg/m². Fifty-eight adults, 24 males and 34 females with a mean age of 40.7 Å± 9.2 years and a BMI of 43.3 Å± 6.6 Kg/m² constituted the control group. Laparoscopic Roux-en-Y and Sleeve gastrectomy were performed in 28 and 1 adolescents and in 56 and 2 adult patients. Comparative results 1-year after surgeries are shown in the table. **Conclusions:** Despite potential differences in physical and psychological characteristics between adolescents and adult patients, weight loss and changes in body composition during the 1st postoperative year after bariatric surgery were highly comparable. Fat free mass was more stable in adolescent patients.

A-106-IH

BARI-ACTIVE: A RANDOMIZED CONTROLLED TRIAL OF A PREOPERATIVE BEHAVIORAL INTERVENTION TO INCREASE PHYSICAL ACTIVITY IN BARIATRIC SURGERY PATIENTS

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Background: Habitual physical activity (PA) may optimize bariatric surgery outcomes; however, studies with objective PA measures show that bariatric surgery patients have low PA levels preoperatively and fail to substantially increase PA postoperatively. Thus, patients need additional support to perform habitual PA. The Bari-Active trial tested a preoperative intervention to increase habitual PA. **Methods:** Participants (n=51, 88% women, 82% White, age=47.2±9.0 years, BMI=45.1±6.7) were randomly assigned preoperatively to 6 weeks of PA intervention (PAI/n=28) or standard care (SC/n=23). PAI received weekly individual face-to-face sessions involving tailored instruction in behavioral strategies (e.g., self-monitoring, goal-setting) to increase home-based structured walking by 30 minutes/day. SC attended routine clinical visits but received no intervention. Participants wore a multi-sensor monitor for 7 days at baseline and post-intervention to measure changes in bout-related (≥ 10-min bouts) and total (≥ 1-minute bouts) moderate-to-vigorous PA (MVPA) minutes/day. **Results:** Retention at post-intervention was 80% in PAI and 82% in SC. PAI achieved a 21.5±22.7 minutes/day increase in bout-related MVPA at post-intervention (4.4±5.8 to 25.9±23.6 minutes/day), compared to no change (-0.7±15.7 minutes/day; 9.6±19.1 to 8.9±12.3 minutes/day) in SC (p=0.001). Similarly, PAI increased total MVPA from 29.2±23.0 to 57.5±32.8 minutes/day whereas SC demonstrated no change (40.4±39.7 to 40.6±31.1 minutes/day) (p=0.001). **Conclusions:** With behavioral intervention, severely obese patients can increase their PA to levels approximating national recommendations prior to bariatric surgery. Thus, the preoperative period may be a powerful “teachable moment” for promoting habitual PA. Future studies should determine whether preoperative PA increases are maintained postoperatively and contribute to better surgical outcomes.

A-107-IH

OUTCOMES OF BARIATRIC SURGERY IN MORBIDLY OBESE PATIENTS INFECTED WITH THE HUMAN IMMUNODEFICIENCY VIRUS

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CCF²

Background: Highly active antiretroviral treatment (HAART) reduces the viral load and prolongs survival in human immunodeficiency virus (HIV) patients. A serious side effect of HAART is the new onset of

obesity and metabolic syndrome. We present our experience with bariatric surgery (BS) in this subgroup of patients. **Methods:** We retrospectively reviewed all patients with HIV that underwent BS between 2002 and 2012. We found 11 HIV positive patients. Data collected were demographics, operation performed and outcome metrics. **Results:** All patients were receiving HAART. Eighty-two percent had a laparoscopic Roux-en-Y gastric bypass (LRYGB) and 18% a laparoscopic sleeve gastrectomy (LSG). Two-year mean estimated weight loss was 50%. Forty-five percent were followed during two years. No perioperative complications were seen. During follow-up one patient had a marginal ulcer at the gastrojejunostomy and one developed malnutrition. The preoperative median total CD4 was 847.5 cell/ μ L (range 281-1,300) and median viral load was 133 IU (range 87-3,000). Postoperatively, the median total CD4 was 502 cell/ μ L (range 214-793) and median viral load was 131 IU (range 10-10,300). Preoperatively, the weight was 137.6 \pm 18.36 kg and BMI was 51.45 \pm 8.98 kg/m². Postoperatively, weight was 99.41 \pm 30.81 kg and BMI was 36.44 \pm 12.57 kg/m² (mean). **Conclusions:** Bariatric surgery appears to be a safe and effective treatment modality in HIV patients affected by obesity and metabolic syndrome. Rapid weight loss results in remission or improvement of HAART related comorbidities without adversely affecting neither the treatment nor the outcome of the disease.

A-108-IH MEASURING ENTRY-LEVEL NURSING KNOWLEDGE RELATED TO THE CARE OF BARIATRIC PATIENTS

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Duke University Medical Center²

Background: Preparing student nurses with the knowledge, skills, and attitudes necessary to become leaders in delivering high quality care and modeling safety in the workplace is of utmost importance, particularly in the realm of bariatric medicine. Nurses are at risk for musculoskeletal injuries, especially during transfers and repositioning of bariatric-sized patients. Nurses also face the challenge of being sensitive and responsive to the needs of this vulnerable group who are often treated with disrespect and insensitivity. Despite these safety and sensitivity concerns, our nursing students have continued to learn using traditional "normal-weight"

human and mannequin simulators and without formal sensitivity training. **Methods:** The purpose of this pilot project is to radically transform how obesity education is taught in entry-level nursing curricula. General bariatric knowledge and self-efficacy related to bariatric patient care, safety and sensitivity will be measured for three time periods: pre-intervention, immediately post-didactic or multi-media intervention, and immediately post-practical simulation intervention using 1) an investigator-developed 35-item multiple-choice test designed to evaluate obesity-related knowledge; 2) an adapted form of the General Self-Efficacy Scale (4-point Likert scale) to evaluate students level of self-efficacy in the care of obese patients; and 3) a practical patient-handling competency skill test targeted for bariatric patients. **Results:** Interdisciplinary collaboration with physical therapy, occupational therapy, and ergonomic teams to create an online multi-media tutorial that features discussion and video clips of safe patient handling skills using bariatric-sized equipment and simulators and a practicum experience that measures bariatric-focused safe patient-handling competency will be key features of this pilot project. Students will be randomly assigned to 4 groups; the times of data collection are at baseline (Time 1), after completion of the online tutorial intervention (Time 2), and after completion of the practical patient-handling experiences (Time 3). This design allows us to measure the effect of the online tutorial alone, the effect of the bariatric practical simulation alone, and the combined effect of the online tutorial plus bariatric practical simulation. Pre/Post test multiple-choice questions will pertain to general and clinical bariatric care, safe patient handling practice (e.g., positioning and transfers), and cultural awareness and sensitivity. The practical skill test will evaluate competency in lateral transfers (bed to stretcher), vertical transfers (bed to chair), and lifts, using specialized bariatric equipment as appropriate. A 2x2 factorial design with repeated measurement will be used; a mixed-effects model for longitudinal data will be used to analyze fixed and random effects. **Conclusions:** The current lack of attention to obesity education and related communication training in the curriculum only complicates the expectation that entry-level nursing students will be culturally aware, sensitive, safe and competent providers. Given the projected obesity rates of the population, didactic and clinical experiences that target the specialized needs of bariatric care is more representative of what future nurses will encounter. Creation of this innovative module and competency checklist provides the foundation for understanding the complex and challenging needs of bariatric patients and may

improve self-efficacy in the basic care and safe patient-handling practice of this typically marginalized population.

Friday, November 15, 2013
8:00 am – 9:45 am EST

**Paper Session VIII: Basic
Science/Education**

**A-143-OR
PROUROGUANYLIN RESPONSE TO MEAL
STIMULATION IS DYSREGULATED IN
OBESITY AND RESTORED TWO WEEKS
AFTER GASTRIC BYPASS SURGERY.**

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Background: Prouroguanylin is a new gut-hormone that is released from the intestinal cells and enters the circulation acting as a hormone. In the mice hypothalamus, prouroguanylin is locally converted into uroguanylin that induces the guanylyl-cyclase 2C-receptor (GUCY2C) signaling activating the appetite-suppressing neuropeptide pro-opiomelanocortin and therefore decreasing appetite. We evaluate whether prouroguanylin changes after meal stimulation in obese patients and whether such profile varies after Roux-en-Y gastric bypass (RYGB) surgery in order to determine if this new gut-hormone plays a significant role in the physiopathology of the obesity and in the anorexigenic effect of bariatric surgery. **Methods:** Ten morbidly obese patients (age 49.6 \pm 11.2 yr.; 7/10 females) were enrolled in a prospective study. All subjects completed a mixed-nutrient meal stimulation study within the 2 weeks prior (baseline) and 2 weeks after RYGB. Venous blood samples were collected immediately prior (fasting state) to drinking the liquid meal, and every 30 min thereafter for 2-hour. Subjects completed a visual analog scale (VAS) assessment of hunger at baseline, 30-min, 60-min, and 120-min blood sample collections. A larger VAS score indicates greater sensation of hunger. **Results:** Preoperative BMI was 45.6 \pm 7.6 Kg/m² and change in BMI was -3.0 \pm 1.4 Kg/m², 14.6 days post-RYGB. As shown in Fig. 1, prouroguanylin levels were significantly different within time period in obese patients before RYGB (P=0.023). In pre-RYGB subjects, multiple paired comparisons found a statistically significant decrease between fasting and 30-min, between fasting and 60-min, and a statistically significant increase between 60-min and 120-min. In patients post-RYGB, prouroguanylin levels were significantly different within time (P=0.001). Multiple paired comparisons found a statistically significant increase between fasting and 60-min, fasting and 90-min, fasting and 120-min and 30-min and 60-min. There was no statistical difference between prouroguanylin curves pre and post-RYGB using repeated-measure GML. However, fasting prouroguanylin levels before (8.82 \pm 1.2 ng/ml) and after RYGB (6.05 \pm 1.2 ng/ml) differ

significantly (P=0.001). Subjects post-RYGB demonstrated significantly (P=0.01) lower hunger VAS score than before RYGB using repeated-measure GML. However, in the fasted state, there was no difference before and after RYGB.

Conclusions: Prouroguanylin is a gut-hormone that in mice has been shown to have an anorexigenic effect. We report for the first time that prouroguanylin levels decrease after meal stimulation in obese patients, while increase after RYGB, showing that in obesity the response of prouroguanylin to meal stimulation is dysregulated compared to lean individuals and such response is restored two weeks after RYGB.

**A-144-OR
BARIATRIC SURGERY IMPROVES THE
NUMBERS OF LATE OUTGROWTH
ENDOTHELIAL PROGENITOR CELLS**

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*University of South Alabama College of M*²

Background: Circulatory dysfunction has emerged as an important factor that drives obesity-related comorbidities. Importantly, circulating endothelial progenitor cells (EPCs) are implicated in vasculature maintenance and repair. While many studies have focused on early outgrowth EPCs, there is scant evidence to suggest that these cells possess restorative capacity. Intriguingly, recent evidence now suggests that late outgrowth EPCs possess the potential to restore vascular beds. Thus, the goal of this study was to assess the effects of bariatric surgery on the levels of late outgrowth EPCs in the circulation of morbidly obese patients. **Methods:** This IRB-approved study (NCT01213940) enrolled 20 type 2 diabetics (BMI > 35) that underwent bariatric surgery. Peripheral blood was obtained at the time of enrollment/surgery (Time = 0), and at 3-, 6- and 24-months later. Buffy coat fractions were harvested, washed once in phosphate buffered saline, suspended into EBM2 medium, plated onto 35 mm² collagen I-coated dishes, and incubated at 37 °C (5% CO₂, atm O₂). Medium was replaced at 24-hours post-harvest and then weekly thereafter. Late outgrowth EPCs were counted at 1 month post-harvest and assayed for in vitro network formation in matrigel. **Results:** Patient BMI decreased from an average of 46.1 \pm 3.2 to 29.6 \pm 2.9 post-surgery. In addition, total numbers of late outgrowth EPCs displayed a time-dependent increase from 1.0 \pm 0.6 to 4.5 \pm 0.5 post-surgery. Importantly, at each time point post-intervention, there was a marked improvement in the capacity of late outgrowth EPCs to generate in vitro networks in matrigel, suggestive of their vasculature-restorative potential. Note that these assays were normalized such that 50,000 late outgrowth EPCs were seeded and networks assessed 24-hours later. Despite this apparent improvement,

the total EPC numbers from morbidly obese patients was still markedly lower than those reported in the literature for normal, healthy control subjects. Intriguingly, we noted a second population of adherent cells (pericyte-like) that formed an obvious series of intricate networks throughout the culture dish. These pericyte-like, "track-forming" cells displayed an elongated body and pseudopod-like projections, and were observed as early as 1-week post-seeding. While the nature of these cells has yet to be established, their presence is especially provocative in light of recent evidence showing that pericytes possess the ability to limit the growth potential of endothelial cells. **Conclusions:** We have revealed a potential relationship between circulating EPC numbers and numbers of circulating pericyte-like cells that may influence vasculature restorative capacity. Of particular interest is our observation that post-operative decreases in BMI were associated with an increase in the number and function of circulating EPCs. However, at all time points assayed, morbidly obese individuals possessed unusually low levels of circulating EPCs compared to healthy control individuals. Future studies will elucidate links between obesity, pericytes, and circulating EPCs to determine whether non-surgical manipulations can be developed as novel therapeutics to treat obesity-related comorbidities that arise due to vascular dysfunction.

A-145-OR EFFECTS ON GLP-1, PYY, AND LEPTIN BY DIRECT STIMULATION OF TERMINAL ILEUM AND CECUM IN HUMANS

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Background: Bariatric surgery has been recognized as metabolic surgery. The marked affirmative outcomes on the comorbidities of morbid obesity, in particular on the metabolic syndrome, by metabolic/bariatric surgery have led to the laboratory and clinical exploration of the hormonal mechanisms involved. Three principal hormones stated to influence satiety and type 2 diabetes are: GLP-1, PYY, and Leptin. We have analyzed the acute elaboration of these hormones subsequent to direct ileal and cecal stimulation by a food hydrolysate in patients undergoing a duodenal switch. **Methods:** In an ongoing, IRB approved, study, Nutren Liquid Nutrition (20 g protein, 49 g carbohydrate, 26 g fat, and vitamins) is instilled either into the terminal ileum (common channel for the duodenal switch being performed), isolated and closed-off between encircling vascular loops, or into the cecum with the ileum encircled and closed by a vascular loop at the ileocecal junction. Blood plasma GLP-1, PYY, and Leptin concentrations are measured at baseline and at 30, 60, 90, and 120 minutes after infusion. The

encircling vascular loops are removed before the end of the procedure; no untoward effects have been observed. **Results:** The mean post-infusion concentration levels of GLP-1 by ileal stimulation were 55.0Å±32.8, 83.4Å±16.1, 78.7Å±23.8, 84.7Å±23.5, and 76.4Å±25.6 for the five time intervals measured; for cecal infusion: 41.3Å±23.2, 39.6Å±21.8, 38.9Å±19.1, 47.4Å±22.3, 51.7Å±27.3 (pMÅ±SD). The comparable time point changes for PYY were: 73.8Å±41.6, 138.1Å±17.7, 149.5Å±23.3, 165.7Å±24.3, 155.5Å±29.1 for ileum, and 62.1Å±24.8, 91.1Å±32.8, 102.1Å±39.6, 119.6Å±37.5, 130.3Å±36.7 for cecum. Total GLP-1 and PYY concentration levels were both significantly higher after ileal stimulation, compared to cecal, at 30', 60', and 90' (P<0.05 by ANOVA). Percentage changes from baseline are shown in the figure. Leptin levels all decreased significantly overall (p<0.05), however, there were no significant differences between ileum and cecum. **Conclusions:** (1) Direct stimulation of the terminal ileum and the cecum in humans by a food hydrolysate elicits significant GLP-1 and PYY level increases and Leptin decreases. (2) The ileal effect on GLP-1 and PYY exceeds that of the cecum. (3) The effect on the PYY concentration is 3- to 4-fold that of GLP-1. From these data, it is difficult to postulate an acute satiety effect of GLP-1 alone by direct ileal or cecal stimulation. The three tested hormones in concert, however, may have a satiety effect and could be part of the type 2 diabetes resolution process after metabolic/bariatric surgery.

A-146-OR MATURE MICRORNA PROFILES ASSOCIATED WITH RESOLUTION OF HYPOADIPONECTINEMIA PRE AND POST GASTRIC BYPASS

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Guthrie Foundation for Biomedical Research³*

Background: Adipose tissue is the most abundant endocrine organ in the human body; it produces adiponectin, a dysregulated peptide hormone in obesity. microRNAs are small (~22 nucleotide), stable, non-coding RNA molecules that play a role in gene regulation by binding to mRNA. In humans, gene silencing is the primary mode of gene regulation. The goal of this research is to observe the changes in circulating levels of total adiponectin, and mature secretory microRNAs, in a set of patients pre- and post-Roux en Y gastric bypass (RYGB), in order to identify potential targets of future study of obesity, the metabolic syndrome, and microRNA. **Methods:** Omental adipose tissue was obtained at the time of surgery from 20 obese patient donors undergoing RYGB; additionally plasma was collected from all donors pre- and 12 weeks post-RYGB, and 7 non-

obese controls. Total Adiponectin (tAdp) in plasma was measured with a commercial ELISA kit. Mature microRNA were isolated from 200 ul of plasma and spiked with Ce-miR39 as reference for analysis. The two step SYBR real time quantitative polymerase chain reaction (qPCR) assays followed the MIQE guidelines. **Results:** Total adiponectin levels are highly variable among this set of donors (n=19, $x=12.3 \pm 4.3 \mu\text{g/ml}$) and even more among the non-obese controls (n=7, $x=21.9 \pm 15 \mu\text{g/ml}$). Pre-RYGB (n=9) tAdp levels ranged from (4.6-19.3 $\mu\text{g/ml}$), BMI (37-58 kg/ml), age (29-48 y) and HbA1c (4.7-6.7). Post-RYGB (n=9) tAdp levels ranged from (8.7-33.6 $\mu\text{g/ml}$), BMI (30-43 kg/ml) and HbA1c (4.7-5.5). Despite the low numbers of samples, correlation analysis was performed between tAdp and BMI; pre RYGB ($r=0.6359$, spearman's ρ^2 ($\rho=0.7333$ $p=0.0246$) and post RYGB ($r=0.1720$), ($\rho=0.23333$ $p=0.5457$). A microRNA plasma panel containing 84 known mature microRNAs was used for comparative analysis between pre- and post-RYGB. After the 12 week surgical weight loss intervention an increase in tAdp from 10.8 to 24.5 $\mu\text{g/ml}$ was accompanied by the down regulation of 31 microRNAs. Additional comparative analysis between a pre GB donor with (tAdp 10.8 $\mu\text{g/ml}$) vs... a non-obese control (tAdp 38.5 $\mu\text{g/ml}$) revealed a 5 fold down-regulation of microRNAs has-miR30d, has-miR29a and has-miR122. Immunohistochemistry analyses on differentiated adipocytes from human omental adipose-derived mesenchymal stem cells (hoADMSC) confirm expression of adiponectin. Secretory microRNAs have been isolated from culture media (surrogate blood). **Conclusions:** After RYGB the presence of mature microRNAs and total adiponectin in plasma was normalized to profiles observed in normal-weight, healthy controls. To the best of our knowledge this is the first report on observations done pre and post gastric bypass on plasma mature microRNAs and total adiponectin. Future plans include study of the regulation of adiponectin gene expression and microRNAs. Funding from Cornell University Center on Microenvironment and Metastasis (CMM) at Cornell University and a physician's grant from the Guthrie Foundation Investigator- Initiated Research Grant. IRB approved clinical trial GHS # 1207-27.

A-147-OR BONE MASS, MICROARCHITECTURE, AND MINERAL HOMEOSTASIS FOLLOWING RYGB IN OBESE RATS

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Background: Due to the invasiveness of iliac crest biopsy and the questionable reliability of bone

densitometry in morbid obesity, the impact of Roux-en-Y gastric bypass (RYGB) surgery on bone mass is poorly understood. To better understand the potential mechanisms for bone loss, we evaluated mineral homeostasis and bone mass in obese rats subjected to RYGB or sham surgery. **Methods:** Twelve diet-induced obese (DIO) male Sprague Dawley rats, aged 23 weeks, underwent sham (n=4) or RYGB (n=8) surgery. Post-operatively, animals were placed on an ad libitum 40% fat, 0.6% calcium diets. Urine was collected in metabolic cages every 5 weeks, and animals were euthanized at post-operative week 20. Calciotropic hormones and bone turnover markers (BTM) were measured pre- and post-surgery. Femurs were analyzed using micro-computed tomography (uCT). **Results:** Compared to baseline and controls, RYGB rats had a two-fold increase in urine calcium excretion at weeks 5 and 10. As expected, age (Table) affected control animal weights and led to coupled decreases in BTM representing bone formation procollagen 1 N-terminal propeptide (P1NP) and osteocalcin (OC) and in BTM representing bone resorption C-terminal telopeptide type 1 collagen (CTx). Compared to post-operative controls (Table), RYGB animals had lower body weight, serum calcium, and 25-OH vitamin D and higher serum parathyroid hormone (PTH), reflecting vitamin D deficiency and a secondary PTH response. Unlike controls (Table), RYGB animals had consistently elevated CTx levels but lower P1NP and OC. This was further demonstrated by uCT findings (Figure) of lower trabecular bone volume ($9.9 \pm 0.14 \text{ mm}^3$ vs... $1.65 \pm 0.05 \text{ mm}^3$, $p<0.001$), trabecular number (1.98 ± 0.23 vs... 1.29 ± 0.1 , $p=0.01$), and thickness ($0.11 \pm 0.01 \text{ mm}$ vs... $0.09 \pm 0.01 \text{ mm}$, $p=0.04$) in RYGB rats as well as decreased cortical bone volume ($27.7 \text{ mm}^3 \pm 1.5$ vs... $9.6 \pm 2 \text{ mm}^3$, $p=0.001$) thickness ($0.64 \pm 0.09 \text{ mm}$ vs... $0.48 \pm 0.02 \text{ mm}$, $p=0.03$), and moment of inertia (60.2 ± 3.3 vs... $33.4 \pm 2.2 \text{ mm}^4$, $p=0.001$) relative to controls. **Conclusions:** In our DIO rat model, RYGB-associated bone resorption appears to be driven principally by vitamin D malabsorption and secondary hyperparathyroidism. The uncoupling of resorption from formation suggests that other mechanisms, in addition to the expected consequences of malabsorption, may be responsible for the observed difference in bone mass. Further mechanistic research to explore these differences may lead to potential targets for bone loss prevention in RYGB patients.

A-148-OR DIET-INDUCED THERMOGENESIS AND RESPIRATORY QUOTIENT AFTER ROUX- EN-Y GASTRIC BYPASS SURGERY - A PROSPECTIVE STUDY

Silvia L Faria, MS; Cynthia K Buffington, PhD¹; Mariane M Cardeal, MD²; Orlando P Faria, MD, Surgeon²

Background: Studies in humans and other animals have shown that Roux-en-Y Gastric Bypass (RYGB) leads to increased energy expenditure (EE). We analyzed several components of EE, such as the respiratory quotient(RQ), resting metabolic rate (RMR) and diet-induced thermogenesis (DIT) among patients before and after RYGB. **Methods:** In this prospective clinical study, RMR, DIT and RQ were measured by indirect calorimetry (IC) in the same 13 patients (mean age 40.8 \pm 6.7 years, 85% female) before and 12 months after RYGB (the preop and postop time points, respectively). Postprandial RQ and postprandial EE were measured after patients consumed a standard 270 kcal meal (62% carbohydrates, 12% proteins, and 26% lipids). The DIT was calculated by the difference between the postprandial EE and RMR. **Results:** At the postop time point, patients showed higher body weight (BW)-adjusted RMR results compared to the preop time point ($p < 0.01$). The absolute and BW-adjusted RMR results 20 minutes after the meal were increased postoperatively ($p < 0.0001$) but not preoperatively ($p = 0.2962$); this increase in RQ was significantly higher in the postop than in the preop time point. **Conclusions:** The observed patients showed increased EE, DIT and RQ after RYGB surgery. These data may serve as important physiological factors contributing to the loss and maintenance of weight after RYGB.

Friday, November 15, 2013
1:30 pm – 3:00 pm EST

Paper Session IX: Metabolic Surgery

A-149-OR HBA1C AS A PREDICTOR OF RISK FOR SEVERE EARLY POSTOPERATIVE COMPLICATIONS AFTER LAPAROSCOPIC GASTRIC BYPASS. A STUDY FROM THE SCANDINAVIAN OBESITY SURGERY REGISTRY

Ingmar Naslund, MD; PhD¹; Erik Stenberg, MD; Eva Szabo
Department of Surgery¹

Background: Glycosylated Hemoglobin A1c (HbA1c) has been described as a risk factor for adverse outcome after cardiovascular and colorectal surgery but never for morbidly obese patients undergoing bariatric surgery. The objectives of the present study were to test if HbA1c could predict adverse outcome in laparoscopic gastric bypass surgery and to determine a threshold value indicative of risk for adverse outcome. **Methods:** From the Scandinavian Obesity Surgery Registry we identified 15 297

patients operated with laparoscopic gastric bypass from January 1st, 2010 to September 30th, 2012 with a registered baseline HbA1c value. Preoperative data was compared with data from a 30-days follow up. Diabetes was defined as preoperative diagnosed diabetes with pharmacological treatment. A total of 2447 patients (16.0%) had pharmacological treatment for diabetes. Severe complications were defined according to the Clavien-Dindo grading as grade 3b or more. **Results:** For non-diabetics HbA1c levels under 6.1 % (NGSP) were associated with lower incidence of severe complications (2.9 %), than higher levels (HbA1c 6.1 - 6.5 % incidence 3.9%, HbA1c > 6.5 %, incidence 4.5 %; $p=0.015$). For diabetics HbA1c levels under 6.1 % was associated with higher incidence of severe complications (incidence 6.5 %), than higher levels (HbA1c >6.1 %, incidence 3.5 %; $p=0.021$). **Conclusions:** Elevated HbA1c levels increases the risk for severe complications during the first 30 postoperative days in non-diabetic patients undergoing laparoscopic gastric bypass surgery. The cut-off level seems to be 6.1 % (NGSP; equivalent to 43 mmol/mol, IFCC). In patients already with pharmacologic treatment for diabetes a lower HbA1c was correlated to an increased risk for severe postoperative complications, higher HbA1c values did not increase the risk for severe postoperative complications.

A-150-OR MIXED-MEAL-TOLERANCE-TEST (MMTT) SOBER C-PEPTIDE AS MARKER FOR HYPOGLYCAEMIA FOLLOWING ROUX-EN- Y GASTRIC BYPASS

Ronald Kefurt, MD; Christine Reiler, MD; Felix B. Langer, MD; Gerhard Prager, MD; Soheila Shakeri-Leidenmuhler, MD; Karin Schindler, PhD; Astrid Hofer; Bernhard Ludvik; Adrian Tuerkcan

Background: Hypoglycemia following Roux-en-Y Gastric Bypass (RYGB) leads to various non-specific symptoms like fatigue, hunger, tachycardia sweating or weakness. While the real incidence of hypoglycemia might still be underestimated, identification of patients at risk is crucial. **Methods:** We performed a mixed meal tolerance test (MMTT) in 51 patients (46 female, 5 male, mean age 40 ± 3.4 years, mean BMI 31.8 ± 1.7 kg/m²) at median 93 months (60-96) after gastric bypass performed between 2005 and 2007. At time of the study, all patients were off T2DM medication. The patients underwent a MMTT with blood testing for Insulin, C-Peptide and Blood Glucose at -10, 0, 15, 30, 60, 120 and 180 minutes. Hypoglycemia was defined as a blood glucose value ≤ 65 mg/dl ($= 3.6$ mmol/L). **Results:** Hypoglycemia was found in 55% (28) of the patients (n=51) at 30 to 180 minutes of the test. The lowest blood glucose level observed was 38 mg/dl ($= 2.1$ mmol/L). No significant difference was found for sober Insulin comparing non-hypoglycemic to hypoglycemic patients 3.7 ± 2.2 ng/ml vs... 2.5 ± 1.4 ng/ml, $p=0.205$). In contrast, sober C-Peptide (at ≤ 10 minutes) was found to be significantly lower in patients with MMTT hypoglycemia compared to patients with a normal MMTT result (1.48 ± 0.39 ng/ml vs... 2.213 ± 0.57 ng/ml, $p=0.004$). **Conclusions:** Sober C-Protein was found to be significantly lower in patients presenting with hypoglycemia than in patients with normal blood glucose levels at MMTT. Thus, sober C-Peptide might serve as a predictive marker for post gastric-bypass hypoglycemia.

A-151-OR PERIOPERATIVE USE OF PROBIOTICS WITH ROUX-EN-Y GASTRIC BYPASS: A PROSPECTIVE RANDOMIZED TRIAL

John D Scott, MD¹; Megan A Miller, RD LD¹; Brent L Johnson, MS¹; Rachel J. Cox, CCRP¹; Eric Bour, MD¹
Greenville Health System¹

Background: Probiotics are beneficial microorganisms, usually bacteria, found in the human gut. Previous literature suggests the possibility of an increase in excess weight lost after gastric bypass surgery with probiotic prophylaxis as well as an increase in gastrointestinal quality of life scores. Evidence shows that probiotic bacteria may increase the production of free amino acids and therefore decrease symptoms of malabsorption. The purpose of

this study is to evaluate the success of daily supplementation of multiple probiotic bacterial cultures over 12 weeks in increasing the percentage of excess weight loss in a Roux-en-Y divided gastric bypass population. **Methods:** The trial was conducted with a total of 140 participants using a double-blind, placebo-controlled process. The sample sizes were powered to detect differences in percentage excess weight loss (%EWL) of 7-10% per group. The study medication was composed of a four-strain probiotic with 100 billion colony forming units per vegetable capsule. All surgical weight loss patients began supplementation at the beginning of their four week pre-surgical diet. Patients continued supplementation for 12 weeks total. Prior to and after the study period, the patients were administered a biometric analysis, a gastrointestinal quality of life survey, and a hair-loss survey. **Results:** A total of 140 patients were enrolled in the study: 68 receiving placebo versus 72 receiving probiotics. Patients who were unable to finish the 12 weeks of the study protocol were excluded from the analysis. 94 patients completed the treatment protocol: 43 receiving placebo versus 51 receiving probiotics. There were no statistical differences in demographic characteristics between the two groups. There was no statistical difference in %EWL between the two groups ($30.6\% \pm 8.5\%$ versus $29.4\% \pm 9.1\%$; $P = 0.521$) after the 12 week treatment period. Although there was a trend toward increased gastrointestinal satisfaction, there were no significant statistical differences in gastrointestinal quality of life scores (7.0 ± 14.8 versus 10.2 ± 12.3 ; $P = 0.3519$). Results from a non-validated hair loss questionnaire do not reveal any significant differences in subjective hair thickness (15% versus 25%; $P = 0.544$) or increasing subjective hair loss. There were no adverse events attributed to probiotic administration. **Conclusions:** Perioperative use of probiotic supplements does not affect weight loss in patients who undergo Roux-en-Y divided gastric bypasses. Although the benefits of routine use of these bacterial supplements may affect overall gastrointestinal health, they should not be advocated as an enhancement for weight loss efforts after bariatric surgery.

A-152-OR BARIATRIC SURGERY IMPROVES RENAL FUNCTION OF PATIENTS OF DIABETES MELLITUS TYPE 2 (T2DM) AFTER ONE YEAR.

Kenkichi K Hashimoto, MD, PhD¹; Yosuke Seki¹;
Kazunori Kasama, MD¹
Yotsuya Medical Cube¹

Background: Obesity is a risk factor for developing diabetes mellitus type 2 (T2DM) and chronic kidney disease (CKD). Bariatric surgery can improve T2DM, and may also improve renal function. The objective of this study was to investigate changes in the estimated glomerular filtration rate (eGFR) and proteinuria in

morbid obese patients in a year after bariatric surgery. **Methods:** eGFR was measured in 137 morbid obese patients with T2DM before and one year after bariatric surgery (LSG 40, LRYGB 22, LSG + DJB 75). Patients were separated by eGFR: hyperfiltration (eGFR>125 mL/min), normal range (eGFR 90-125 mL/min), CKD stage 2 (eGFR 60-89 mL/min), and stage 3 (30-59 mL/min) and stage 4 (15-29 mL/min). And urinary protein was examined qualitatively in 75 patients with severe T2DM performed LSG + DJB. Patients were separated into improved, unchanged and progressive groups. Each factor was analyzed between improved and progressive groups. **Results:** Of the 137 patients, 25 (18.2%) had hyperfiltration, 68 (49.6%) were normal range, 36 (26.3%) were stage 2, and 8 (5.8%) were stage 3, and the mean eGFR was 101.2 \pm 29.6 mL/min before the operation. 125 patients can be followed at one year after the operation. 14 (11.2%) had hyperfiltration, 61 (48.8%) were normal range, 43 (34.4%) were stage 2, 6 (4.8%) were stage 3, and 1 (0.8%) were stage 4 and the mean eGFR was 95.4 \pm 25.5 mL/min. The hyperfiltration group decreased, but it was difficult to know that they were improved or progressive only by eGFR. 75 patients with severe T2DM performed LSG + DJB were examined urinary protein qualitatively, and 66 patients can be followed. 30 patients (45.5%) were improved, 27 (40.9%) were stable or unchanged, and only 7 (10.6%) were progressive. Each factor was analyzed between improved and progressive groups, and the percentage of excess weight loss (%EWL) and postoperative BMI were statically significant. **Conclusions:** Abnormal renal function was common in morbid obese patients with T2DM. Bariatric surgery-induced weight loss had positive effects on renal function after one year.

A-153-OR OUTCOMES OF BARIATRIC SURGERY IN MORBIDLY OBESE PATIENTS WITH TYPE 1 DIABETES

Ali Aminian, MD¹; Sangeeta Kashyap, MD¹; John P Kirwan, PhD¹; Hideharu Shimizu¹; Mohammad Jamal¹; Abraham Abdemur, MD¹; Raul J Rosenthal, MD¹; Stacy A Brethauer, MD¹; Philip R Schauer, MD¹
*Cleveland Clinic*¹

Background: A growing body of evidence has demonstrated marked and sustained improvement in type 2 diabetes following bariatric surgery. However, there is limited data on the impact of bariatric surgery in type 1 diabetes (DM1). The aim of this study was to evaluate the metabolic outcomes including the glycemic status of patients with DM1 after bariatric surgery. **Methods:** Clinical outcomes and metabolic parameters of 10 morbidly obese patients with poorly controlled DM1 who underwent laparoscopic bariatric surgery between 01/05 and 12/12 were retrieved from an IRB approved database. The diagnosis of DM1 was verified for all patients by the presence of pancreatic auto-antibodies (islet cell, and glutamic

acid decarboxylase), absence of c-peptide, and/or documented history of diabetic ketoacidosis (DKA). Baseline characteristics, intraoperative data, and postoperative outcomes including changes in weight, glycated hemoglobin (A1C), daily insulin requirements, lipid panel, and blood pressure were assessed. A paired t-test was used to analyze changes at the last follow-up point from baseline. **Results:** Patients had a male-to-female to ratio of 1:9, a mean age of 45.6 \pm 10.9 years, a mean baseline BMI of 41.6 \pm 3.8 kg/m², a median duration of DM1 of 22 (range, 2-43) years, and a median of 10 (range, 5-13) obesity- or DM1-related comorbidities. One patient had a history of coronary bypass and one had a history of failed kidney-pancreas transplant. Bariatric procedures included laparoscopic Roux-en-Y gastric bypass (n=7), adjustable gastric banding (AGB, n=2), and sleeve gastrectomy (n=1). There was no intraoperative complication and no need for conversion to laparotomy. In total, 5 postoperative complications occurred including DKA on postoperative day 10, DVT, ulcer at gastrojejunal anastomosis, esophageal dysmotility, and persistent nausea. At a mean follow up of 36.0 \pm 32.6 months, excess weight loss >50% was achieved in all patients except one case of AGB. The mean reduction in BMI of 26.6 \pm 9.4% was associated with a significant mean reduction in A1C (9.9 \pm 1.5 vs... 8.8 \pm 0.8 percent, p=0.02) and daily insulin requirement (0.74 \pm 0.32 vs... 0.40 \pm 0.15 U/kg, p=0.004). There was also favorable change in levels of LDL (p=0.02), HDL (p=0.001), and triglyceride (p=0.007) following surgery. Hypertension resolved or improved in 5 of 7 (71%) hypertensive patients. Albuminuria resolved in one of two patients with preoperative microalbuminuria. **Conclusions:** The findings of this study, which is the largest case series to date, indicate that bariatric surgery leads to a remarkable and sustained weight loss in severely obese patients with DM1 and results in significant improvement in their glycemic status and comorbid conditions, despite having prolonged diabetes. The favorable metabolic effects of bariatric surgery may facilitate medical management of DM1. The true role of bariatric surgery in DM1 awaits larger studies.

**Friday, November 15, 2013
3:30 pm – 4:45 pm EST**

Paper Session X: Long-Term Outcomes

A-154-OR PREGNANCY REDUCES INITIAL WEIGHT LOSS AFTER BARIATRIC SURGERY BUT DOES NOT AFFECT LONG TERM OUTCOME.

Francois Pattou, MD¹; Quyen Pham²; Robert Caiazzo²; Marie Pigeyre²; Helene Verkindt²; Philippe Deruelle²

Background: Bariatric surgery is often performed in women in reproductive age and postoperative pregnancies are frequent. The deleterious influence of pregnancy in the natural history of obesity is well documented. However, the influence of postoperative pregnancy on long term outcomes of bariatric surgery is not known. **Methods:** We enrolled in this retrospective study 620 women aged 18-42 years old who had undergone bariatric surgery with laparoscopic adjustable gastric band or gastric bypass in two expert centers. Weight loss and comorbidities incidence at 2 and 5 years post-surgery were compared between women who experienced pregnancy after their bariatric surgery (group A, n=85) and those without postoperative pregnancy (group B, n=535). We also compared the outcome of women with early (< 12 months) or late (>12 months) postoperative pregnancy. **Results:** The preoperative BMI (Body Mass Index) was identical between the 2 groups (A: 48.0 \pm 7.0 kg/m²; B : 47.4 \pm 7.2 kg/m²; p = 0.5). At two years, the excess weight loss (EWL) was inferior in women with postoperative pregnancy (A = 41.0 \pm 27.2% vs.. B = 55.8 \pm 28.3%, p < 0.001) but was similar in both groups 5 years after bariatric surgery (A = 47.5 \pm 27.6% vs.. B = 48.4 \pm 27.1%, p = 0.8). This was true with both surgical procedures. The decrease of comorbidities (hypertension, diabetes, sleep apnea disorder) was also similar between both groups after 5 years. The gestational weight gain (GWG) was inferior in women with early pregnancies (< 12 months = 4.23 \pm 9.58kg; \geq 12 months: GWG = 9.54 \pm 10.58 kg; p = 0.043). Nutritional support was enforced in every pregnant patient and vitamin supplementation was required in 84 % of cases (< 12 months = 87.5 % vs.. >12 months = 82.4 %; p = 0.751). The patients who became pregnant early after bariatric surgery didn't develop more nutritional deficiencies. The GWG seemed to be higher when the band was deflated during pregnancy (GWG = 14.7 \pm 11.16 kg) vs.. band without fluid removal (GWG = 5.11 \pm 7.44 kg) or gastric by-pass (GWG = 5.7 \pm 11.29 kg) (p = 0,001). **Conclusions:** Pregnancy slowed down weight loss after bariatric surgery but did not affect overall weight loss or the reduction of comorbidities at 5 years. Under close nutritional supervision, early pregnancy after bariatric surgery (< 12 months) did not alter long term weight loss and did not increase the risk of nutritional deficiency. In pregnant women with gastric band, the deflation of the band increased GWG and it should not be routinely recommended.

A-155-OR FIFTY PERCENT LONG-TERM FAILURE RATE OF THE LAPAROSCOPIC- ADJUSTABLE GASTRIC BAND AS A PRIMARY BARIATRIC PROCEDURE.

Background: There are dichotomous studies in the literature citing the success of the laparoscopic adjustable gastric band (LAGB) as a primary weight-loss procedure (EWL of 47% at 15 years for the majority of patients versus 51% long-term failure rate at 10 years). Determinants of success of a bariatric procedure are many but paramount is the ability to durably produce significant and reliable weight loss. We sought to determine the primary, long-term success of the LAGB by defining failure as either clinical weight loss failure (EWL<20%) or terminal band failure (terminal deflation, removal or conversion to a secondary bariatric procedure). **Methods:** A retrospective chart review was performed on patients who underwent a LAGB as a primary bariatric procedure between January 2003 through December 2007. Data collected included patient age, sex, BMI, weight, ideal body weight (IBW), post-op bariatric clinic follow-up length, last documented electronic medical record body weight, excess weight loss (EWL), and number of adjustments. Charts were also reviewed for complications of the LAGB including: pathology by EGD/UGI, band-related ER visits/admissions, revisional surgery, clinical weight-loss failure (EWL<20%) and terminal band failure. **Results:** 132 LAGBs were performed during the study period with an average patient age of 45.3 \pm 11.5 years (71.2% women, 28.8% men). The average pre-op BMI was 45.9 \pm 5.9. 11 patients had follow-up less than one year and were excluded from post-op analysis. 29 of 121 patients (24.0%) had a terminal band failure. 13 patients had the band permanently deflated and 16 patients required the band be removed. 7 were converted to an alternative bariatric procedure (EWL of 25.1%) and 9 were terminally removed (EWL of 55.8%). 7 of the 9 that were removed were due to symptoms of dysphagia or gastric outlet obstruction. The average total follow-up for 92 functioning bands was 4.3 \pm 2.2 years (bariatric clinic follow-up of 3.7 \pm 2.2 years). The average long-term EWL was 30.2%. The average BMI loss was -7.4%. The average number of adjustments was 7.3 \pm 4.3. 32 of 92 patients (34.8%) had a clinical weight loss failure (EWL<20%). In total, 50% of patients had long-term band failure due to clinical weight loss failure (26%), band deflation (11%), terminal band removal (7%), or conversion to secondary weight loss procedure (6%). **Conclusions:** This study finds that long-term, despite sufficient follow-up and clinical adjustments, the LABG does not provide durable or meaningful weight loss for fifty percent of patients due to either inadequate weight loss or adequate weight loss with unmanageable symptoms. This suggests that the LABG should be abandoned as a primary bariatric procedure for the majority of morbidly obese patients due to its unacceptably high failure rate.

**A-156-OR
THREE YEAR WEIGHT AND HEALTH
OUTCOMES IN THE LONGITUDINAL
ASSESSMENT OF BARIATRIC SURGERY
(LABS) CONSORTIUM**

Anita P Courcoulas, MD MPH¹; Nicholas J Christian, PhD²; Steven H Belle, PhD, MScHyg²; Paul D Berk, MD³; David R Flum, MD, MPH, FACS⁴; Luis Garcia, MD FACS⁵; Mary Horlick, MD⁶; Melissa A Kalarchian, MS PhD⁶; Wendy C King, PhD⁶; Emma J Patterson, MD⁷; John R Pender, MD⁸; Alfons Pomp, MD⁹; Walter J Pories, MD⁹; Richard Thirlby, MD¹⁰; Susan Z Yanovski, MD¹⁰; Bruce M Wolfe, MD¹¹
University of Pittsburgh Medical Center¹
University of Pittsburgh²
Columbia University Medical Center³
University of Washington⁴
Neuropsychiatric Research Institute⁵
NIDDK⁶
Legacy Good Samaritan Hospital⁷
East Carolina University⁸
Weill Cornell School of Medicine⁹
Virginia Mason Medical Center¹⁰
Oregon Health & Science University¹¹

**This paper has been moved to the JAMA Session;
Friday, 11/15, 5:15 pm – 6:15 pm**

**A-157-OR
INCIDENCE, TREATMENT, AND
OUTCOMES OF IRON DEFICIENCY AFTER
LAPAROSCOPIC ROUX-EN-Y GASTRIC
BYPASS: A 10-YEAR ANALYSIS**

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Gundersen Medical Foundation¹
Gundersen Health System²

Background: Laparoscopic Roux-en-Y gastric bypass (LRYGB) can lead to iron malabsorption through exclusion of the duodenum and proximal jejunum, decreased gastric acidity, and modified diet. Intravenous (IV) iron is a treatment for severe iron deficiency, but the incidence of iron deficiency and treatment with IV iron after LRYGB are largely unknown. Our objective was to determine the incidence of iron deficiency and the need for IV iron administration after LRYGB at our community-based integrated multi-specialty health system and teaching hospital. **Methods:** After obtaining Institutional Review Board approval, the medical records of patients who underwent LRYGB from September 2001 to December 2011 were retrospectively reviewed. Inclusion criteria consisted of at least one ferritin value after surgery. Patients were stratified by level of iron deficiency. Patients with at least one ferritin value < 50 ng/mL were considered iron deficient. Statistical analysis included ANOVA. A P value < 0.05 was considered significant. **Results:**

There were 959 patients included; 84.9% were female. Mean age was 43.8 years, and preoperative body mass index was 47.4 kg/m². Four hundred ninety-two (51.3%) patients were iron deficient. Of these, 40.9% were severely iron deficient, with a ferritin value < 30 ng/mL. Two hundred eighteen patients (22.7%) met criteria for iron-deficiency anemia, and 92.2% of patients with iron-deficiency anemia were severely iron deficient. Patients who were iron deficient in the postoperative period were younger (41.7 vs... 46.0 years; P=0.001). The incidence of iron deficiency was increased among women compared to men (57% vs... 20%; P=0.001) and women who were premenopausal compared to those who were postmenopausal (71% vs... 35%; P=0.001). IV iron was required by 6.7%; and 72% required ≥2 treatments. After IV iron therapy, 53% had improvement in both hemoglobin and ferritin values, and 39% had improvement in ferritin values only. Mean ferritin levels at 1, 2, and 3-5 years postoperatively were 45.8, 36.8, and 22.1 ng/mL in the iron deficient group versus 159.4, 155.9, and 129.0 ng/mL, in patients who were never iron deficient, respectively (P=0.001). **Conclusions:** Given the incidence of iron deficiency after LRYGB observed in our series, patients should have iron status monitored carefully by all providers and be appropriately referred for treatment. Female patients should be counseled that there is a 50% chance they will become iron deficient following LRYGB.

**A-158-OR
DIABETES REMISSION AND
RECURRENCE ON INTERMEDIATE TERM
FOLLOW-UP AFTER BILIOPANCREATIC
DIVERSION WITH DUODENAL SWITCH**

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Chirurgie Generale IUCPQ U Laval

Background: Biliopancreatic diversion with duodenal switch (BPDDS) effectively puts type 2 diabetes (T2DM) into remission for the majority of patients. We aimed to determine the rate of diabetes remission and subsequent recidivism on intermediate term follow-up. **Methods:** A retrospective review of severely obese patients with type 2 diabetes mellitus (T2DM) who underwent BPD-DS between 2006 and 2009 was performed. Change in diabetes status was evaluated at regular annual intervals up to and including the last documented follow-up. Remission was defined as cessation of anti-diabetic agents and normalization of fasting glucose (<7.0mmol/L) and HbA1c (<6.5%). Recurrence after remission was documented. Actuarial survival analysis was performed to estimate remission. Recurrence on last follow-up was analyzed using the Kaplan-Meier approach. Continuous data is reported as means. **Results:** 475 T2DM patients (60% F) were reviewed. Age, weight, and BMI at time of surgery were 46.8±9.1 yrs., 143.6±29 Kg, and 51.9±8.5 Kg/m², respectively. Follow-up time was 4.1±1.5 years (Range: 0 to 7.0 yrs.). Weight on last

follow-up was 87.7Å±19.4 Kg. Elevated baseline fasting glucose and HbA1c (despite medical therapy) normalized as early as 3 months postoperatively and remained so on last follow-up. The cumulative 5yr. remission rate is 90%. Probability of persistent remission on last follow-up is 87%. Cumulative recurrence rate at last follow up and at 5 years is estimated at 2.9% and 3.4%, with a population at risk of 446 and 118 patients, respectively. **Conclusions:** BPD-DS induces durable and sustained diabetes remission in obese T2DM patients on intermediate term follow-up up to 7 years.

Thursday, November 14, 2013
3:00 pm – 5:00 pm EST

Video Sessions: Scientific Sessions

A-101-V
LAPAROSCOPIC REMOVAL OF AN ERODED ADJUSTABLE GASTRIC BANDING TO THE COLON AND STOMACH
Rena Moon¹; Andre Teixeir, MD; Muhammad A Jawad, MD
Orlando Regional Medical Center¹

Background: 63-year-old male status post laparoscopic lap band insertion 8 years ago presented with abdominal pain and dysphagia that was not relieved by fluid removal. Preoperative upper endoscopy showed proximal esophageal dilatation and colonoscopy showed erosion of the tube into the transverse colon. **Methods:** Veress needle was inserted in the left upper quadrant. Using the 5 port technique, the abdomen was insufflated. The left lobe of the liver was stuck to the pouch and to the band, the adhesions were taken down completely. The transverse colon was plastered into the anterior stomach wall. The band tubing had eroded into it and a colostomy was performed. The buckle was freed up, transected and the band was removed. An abscess cavity was formed around the band due to the erosion in the stomach and colon. The site of erosions where closed in layers. A gastrostomy tube was placed distally for decompression of the stomach. 19 Fr Blake drain was placed and the abdomen was irrigated with copious amount of fluid. Patient was taken to recovery in stable condition. **Results:** The recovery was uneventful. Patient was kept NPO for 5 days, UGI was ordered and no leak was seen. He was started on liquid diet on POD 5. **Conclusions:** Complications after gastric banding are not only limited to slippage or erosions around the stomach. We should be aware of other erosions and other complications in the future.

Friday, November 15, 2013
8:00 am – 9:45 am EST

A-102-V
LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS (LRYGB) IN A KNOWN CASE OF MIDGUT NON-ROTATION

Pornthep DR Prathanvanich, MD¹; Bipan Chand, MD¹
Loyola University Chicago Stritch School¹

Background: Intestinal rotational anomalies affect 1 in 500 live births, with 90 % presenting in the first year of life. The two main types of intestinal rotational anomalies are mixed rotation (malrotation) and non-rotation. In adults, the anomaly may be asymptomatic and found incidentally during operation. We present a case of non-rotation treated successfully with LRYGB. We review these specific types of anomalies and the strategy employed to technically approach them.

Methods: This 59 years old male patient with a BMI of 43kg/m2 underwent evaluation and recommendations to undergo gastric bypass. He had a known history of intestinal rotational anomaly, but of unknown type. He underwent preoperative abdominal computed tomography and upper and lower endoscopy confirming midgut non-rotation. The duodenojejunal junction (DJJ) resided on the right side with the entire colon laying to the left and the appendix in the lower mid-pelvis. He was scheduled for LRYGB. **Results:** The operation was performed laparoscopically using a five port technique. Given that the stomach lies in its normal anatomical position, the gastric pouch creation was uneventful with the surgeon standing on the patients right side. The DJJ was traced from the patients right side to the cecum, which was residing in the mid portion of the pelvis. The entire colon was on the patients left side. The bilio-pancreatic limb was created after measuring approximately 50 cm from the DJJ and dividing the bowel. The alimentary limb was run for 150 cm and a side to side anastomosis created between both limbs. The mesenteric defect was closed by on both sides of the jejunostomy by the surgeon moving from the right to left side of the patient. The gastrojejunostomy was performed using a circular stapled technique. Operative time was 134 minutes and blood loss was 10 ml. There were no perioperative complications. **Conclusions:** LRYGB can be safely performed in patients with non-rotation of the midgut. A thorough understanding of the anatomy is required to avoid technical complications and plan the operation. Unlike malrotation, there are no Ladd's bands that have to be cut and the appendix resides in the pelvis and not upper abdomen. Specific complications should be prevented by closing mesenteric defects and an appendectomy is not required.

1:30 pm – 3:00 pm EST

A-103-V
SPECTRUM OF STAPLE LINE LEAKAGE AND MANAGEMENT FOLLOWING SLEEVE GASTRECTOMY

Christopher S Armstrong, MD¹; Ninh T Nguyen, MD;
Brian Smith, MD
University of California, Irvine¹

Background: The sleeve gastrectomy as a primary bariatric operation has recently been gaining popularity among surgeons and patients. Gastrointestinal leak is one of the most dreaded complications following sleeve gastrectomy as it can lead to significant morbidity and mortality. Expedient recognition and early institution of management for gastrointestinal leaks are keys to minimize the progression from systemic inflammatory response to eventual sepsis. A high index of suspicion is crucial in order to recognize these leaks early on. Prompt management of gastrointestinal leak can also minimize the risk for development of a chronic fistula which is often difficult to treat. This video highlights various presentations of leakage following sleeve gastrectomy and demonstrates potential management strategies. **Methods:** Five cases of leakage following sleeve gastrectomy referred to our institution for further management were compiled in this video to highlight the various presentations of leakage following sleeve gastrectomy. Endoscopic and laparoscopic management of staple line leakage is demonstrated. **Results:** The included cases demonstrate the laparoscopic and endoscopic management of early and late staple line leakage following sleeve gastrectomy. A case of chronic fistula following chronic staple line leakage requiring completion gastrectomy and laparoscopic Roux-en-Y reconstruction is also shown. **Conclusions:** Gastrointestinal leak is a dreaded complication after bariatric surgery and is associated with significant morbidity and mortality. Early identification and management is very important in an effort to minimize the morbidity associated with the systemic inflammatory response and sepsis. A high index of suspicion is vital to facilitate expedient diagnosis and treatment of a staple line leak. Treatment of patients who present with a localized leak and without signs of systemic toxicity can include nonoperative management by rendering the patient NPO, providing parenteral nutrition and broad spectrum antibiotic therapy as well as percutaneously draining any intrabdominal fluid collections. Endoscopic stenting has become an appropriate adjunct to this strategy and can obviate the need for reoperation for some patients. Surgical treatment including reoperation with drainage remains the mainstay of therapy for patients presenting with obvious signs of sepsis. In addition chronic leaks and fistulae often require surgical re-exploration with proximal gastrectomy and esophagojejunostomy.