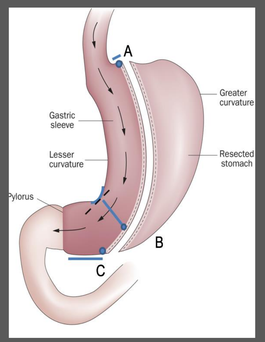
COMPARISON OF OUTCOMES PRE AND POST UTILIZATION OF 24CM SINGLE FIRE STAPLER FOR SLEEVE GASTRECTOMY IN PRIMARY BARIATRIC PROCEDURES

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Objective:

Sleeve based procedures (Sleeve Gastrectomy, Single Anastomosis duodenal-ileal bypass (SADI), and Duodenal Switch) account for approximately 60% of all primary bariatric procedures performed nationwide. Until recently the only option to perform a sleeve gastrectomy would be to use multiple firings of short 45mm and 60mm staple loads that require experienced surgical techniques to avoid potential issues such as twisting of the sleeve, stricture, and those related to crossing staple lines such as leaks or bleeds. Additionally, the use of the anatomical sleeve gastrectomy (ASG) approach with the assistance of a 24 cm single fire stapler (Titan SGS by Teleflex Surgical) may also allow for less variability in technique as well as illustrate comparable if not superior postoperative data.



Anatomical Sleeve Gastrectomy (ASG) Technique

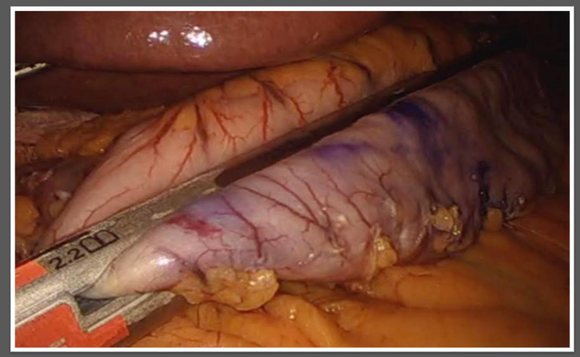
A. 1cm from gastroesophageal junction

B. 3cm from the incisura angularis

C. 3-5cm from the pylorus

Methods:

A retrospective review was performed of all patients who underwent primary sleeve-based procedures (ASG, SADI, DS) from January 2021 to December 2022 by 2 surgeons at a single COE Bariatric institution. Data was extracted from MBSAQIP and EMR and clinical data was obtained for our subset of patients. The data evaluated the early results of the first 200 patients who had a primary bariatric procedure utilizing a single fire 24cm stapler (Titan SGS) and comparing the preliminary results and outcomes with a similar cohort of patients who had a primary bariatric procedure by the same surgeons utilizing traditional multi-fire staple loads.



Results:

Of 399 patients analyzed, 198 underwent procedures w/ Titan SGS. 201 patients had procedures w/ multi-fire staple loads. Females were the majority in both groups. Preop weight and BMI was comparable. In Titan SGS group, 133 (67.2%) had ASG and 65 (32.8%) SADI/DS. In Non-Titan group, 111 (55.2%) had ASG and 90 (44.8%) SADI/DS. Postop analysis included infection, leak, bleed, obstruction, readmission, and reoperation. Complications in Titan SGS group for ASG: infection that resulted in reoperation (Exploratory Laparoscopy), 1 non-GI bleed (at splenic hilum) with readmission/reoperation & 1 DOS reoperation for hematoma evacuation/bleed at distal tip of staple line. Titan SGS SADI/DS complications: staple line leak w/ readmission/reoperation, elevated LFT's and hydronephrosis, n/v/abdominal pain, peri-splenic hemorrhage w/o laceration, PNA/positive blood cultures. Non-Titan complications for ASG: SSI infection, readmissions for acute pancreatitis and acute appendicitis resulting in reoperation. Non-Titan complications for SADI/DS included readmissions w/ and w/o interventions: 1 lower GI bleed (anticoagulation use), 1 pt w/ sepsis, abdominal pain, hematoma & colon perforation that underwent colectomy, 1 pt w/ SBO, UGI bleed w/ hematoma evacuation and incisional hernia repair, and 1 pt w/ infection secondary to perforation of ileum distal to DI anastomosis & UGI bleed with negative EGD. It is important to note that in comparing postoperative complications in the Titan SGS and non-Titan group, no p-values were < 0.05, therefore not found to be statistically significant.

	Titan SGS Pts	Non-Titan Pts
# of Pts	198	201
Age	42.5	42.5
Female	160	169
Male	38	32
Preop Wt	292.8	284
Preop BMI	47.8	45.8
ASG	133	111
SADI/DS	65	90

	Titan SGS		Non-Titan		
	ASG	SADI/DS	ASG	SADI/DS	p-value
Sepsis/infection	1	0	1	2	0.32
Staple Line Leak	0	1	0	0	0.31
GI Tract Bleed	0	0	0	3	0.08
Non-GI Tract Bleed	2	1	0	1	0.3
Stenosis/Obstruction	0	0	0	1	0.32
Readmissions	1	5	2	5	0.81
Reoperations	3	1	1	3	0.98

Conclusions:

Analysis of the early data utilizing the Titan SGS 24cm single fire stapler in sleeve-based procedures indicates a straighter sleeve with fewer staple loads and the potential for fewer complications. While this study illustrates early data, we did not find statistical significance when evaluating postoperative complications of ASG or SADI/DS in either group. Additionally, our experience with the Titan SGS in creation of sleeves based on anatomical landmarks indicate more consistent sleeve anatomy and improved outcomes. Our findings also illustrate the utilization of the Titan SGS 24 cm single fire stapler has the potential to increase the safety and efficacy of our most common bariatric procedures including ASG and SADI/DS.