Chronic Anticoagulation Therapy is Associated with Adverse Outcomes in Patients Undergoing Sleeve Gastrectomy Conversions: Analysis of 30,664 Patients from the MBSAQIP Database

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Background

- The impact of **chronic anticoagulation therapy (CAT)** on **outcome** and **hospital length of stay** following sleeve gastrectomy (**SG**) **conversions** remains unclear
- This study **compared outcomes** between patients **with** and **without CAT** undergoing SG conversions using the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (**MBSAQIP**)

Materials and Methods

- Retrospective analysis of the MBSAQIP database from **2020 to 2022**, due to availability of data on conversions
- Patients undergoing conversion from **SG to** Roux-en-Y gastric bypass (**RYGB**), single anastomosis duodeno-ileal bypass (**SADI**), or biliopancreatic diversion with duodenal switch (**BPD-DS**) were included
- **Primary** outcomes were **indications** for conversions and **30-day serious complications**. **Secondary** outcomes included **specific postoperative complications, length of stay, and operative time**. Multivariable logistic regression analysis was also performed

Results

Demographics (n, %)	CAT (N=935)	Non-CAT (N=29,729)	P value
Age, (Mean, SD)	52.08 (10.6)	45.73 (10.3)	p<0.001
Male	180 (19.2)	2,839 (9.5)	p<0.001
BMI, (Mean, SD)	42.3 (9.6)	40.3 (8)	p<0.001
Insulin dependent	145 (15.5)	2,640 (8.8)	p<0.001
Hypertension	137 (61.8)	2,283 (33.9)	p<0.001
History of venous thromboembolism	432 (46.2)	652 (2.1)	p<0.001
Due to GERD	417 (44.5)	15,361 (51.6)	
Due to weight gain	244 (17.5)	7,850 (26.4)	
Due to suboptimal weight loss	164 (26)	4,393 (14.7)	

Outcomes (n, %)	CAT (N=935)	Non-CAT (N=29,729)	P value
SG to RYGB	805 (86.1)	26,583 (89.4)	p=0.005
SG to SADI	51 (5.4)	1,297 (4.3)	p=0.005
SG to BPD-DS	79 (8.4)	1,849 (6.2)	p=0.005
Mean operative time	158 (74)	144 (66)	p<0.001
Length of stay	2.27 (2.4)	1.68 (1.7)	p<0.001
Serious complications	132 (14.1)	1,909 (6.4)	p<0.001
30-day readmission	129 (13.8)	2,046 (6.8)	p<0.001
Reoperation	46 (4.9)	823 (2.7)	p<0.001
Postoperative Bleeding	45 (4.8)	498 (1.6)	p<0.001
Deep surgical site infections	19 (2.0)	311 (1.05)	p=0.004

Abbreviations: CAT, Chronic Anticoagulation Therapy; **N,** Number; **%,** Percentage; **SD,** Standard Deviation; **BMI,** Body Mass Index; **GERD,** Gastroesophageal Reflux Disease; **SG,** Sleeve Gastrectomy; **RYGB,** Roux-en-Y Gastric Bypass; **SADI,** Single Anastomosis Duodenal-Ileal Bypass; **BPD-DS,** Biliopancreatic Diversion with Duodenal Switch; **P value**, Probability value.

- On multivariable analysis, **CAT was not independently associated** with increased odds of serious complications (OR 1.06, 95%CI 0.61-1.85, p=0.824) when adjusting for confounding factors including age, gender, BMI, and comorbidities

Conclusion

Patients on **CAT** undergoing sleeve gastrectomy conversions experience **higher complication rates and longer hospital stays**. However, **anticoagulation therapy is not independently associated with increased serious complications** after adjusting for comorbidities