IMPACT OF CHRONIC IMMUNOSUPPRESSION ON BARIATRIC SURGERY OUTCOMES AND COMPLICATIONS

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BACKGROUND

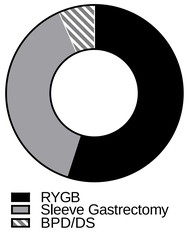
Patients with obesity and diseases requiring chronic immunosuppression incur additional surgical risk with physiologic and metabolic derangements that may influence weight loss. The impact of immunosuppressant medications on bariatric surgery long term outcomes is not well elucidated.

METHODS

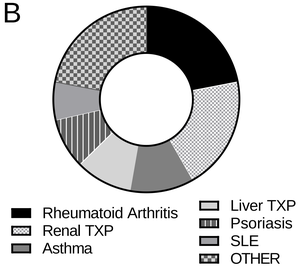
A retrospective analysis of chronically immunosuppressed patients who underwent primary bariatric surgeries (Sleeve gastrectomy (SG), Roux en Y gastric bypass (RYGB) or biliopancreatic duodenal switch (BPD/DS)) was conducted with our institution's medical records (2008-2020). Data collected included BMI, disease and immunosuppression regimen and complications at 3, 6, 12, 24 and 60 months.

POPULATION DATA AND SURGICAL OUTCOMES

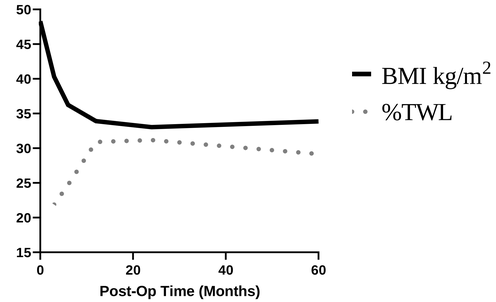
A



B



C

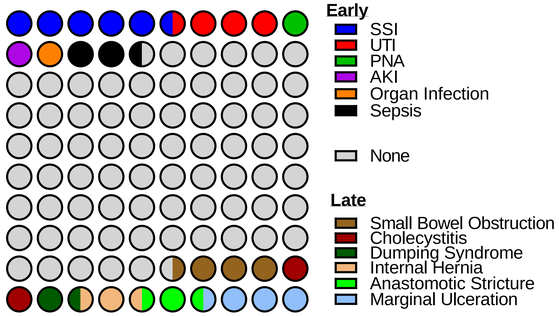


Intraoperative complications	N	%
Splenic Injury	1	1.1
Anastomosis Revision	1	1.1
Conversion to Open	2	2.2
TOTAL	4	4.4

Early Complications < 30 days	N	%
Surgical Site Infection	5	5.5
UTI	3	3.3
Pneumonia	1	1.1
Acute Kidney Injury	1	1.1
Organ Space Infection	1	1.1
Sepsis	2	2.2
TOTAL	13	14.3

Late Complications	N	%
Small Bowel Obstruction	3	3.3
Anastomotic Leak	0	0
Cholecystitis	2	2.2
Dumping Syndrome	1	1.1
Internal Hernia	2	2.2
Anastomotic Stricture	2	2.2
Marginal Ulceration	3	3.3
TOTAL	13	14.3

D



Figures: A) Percentage of population undergoing each operation B) Underlying disease requiring long term immunosuppression in this patient cohort (other include C) ΔBMI and %TWL over time from bariatric operation D) Parts per whole graphical representation of early (<30 days) and late (≥30 days) complications

RESULTS

A total of 91 patients on chronic immunosuppression were identified. Of the 91 patients, 54.9% had undergone a RYGB (N=50), 38.4% had a SG (N=35) and 6.6% had a BPD/DS (N=6). Prednisone was used in 75.82% (N=69) of the patients. The most common underlying disease requiring immunosuppression was rheumatoid arthritis at 21.98% (N =20) followed by renal transplant at 19.78% (N=18), asthma at 10.99% (N=10) and liver transplant at 9.89% (N=9). There was a total of 2 (2.20%) intraoperative complications. In the post-operative period, 3 cases (3.3%) of UTI, 1 case (1.10%) of pneumonia, and 6 cases (6.59%) of surgical site infections were noted. In follow-up 3 (3.30%) of patients experienced marginal ulcerations while no gastrointestinal leaks occurred. The mean pre-surgical BMI was 48.29 kg/m2 (SD=18.41). Percent total weight loss (%TWL) and BMI reduction was 21.88% and 7.98 kg/m2 (SD=7.82) at 3 months, 24.73% and 12.06 kg/m2 (SD=5.31) at 6 months, 30.89% and 14.83 kg/m2 (SD=9.07) at 12 months, 31.17% and 15.24 kg/m2 (SD=9.79) at 24 months, 29.48% and 14.43 kg/m2 (SD=13.46) at 60 months, respectively. The mean follow up time was 30.49 months (SD=24.19).

CONCLUSIONS

Bariatric surgery is a safe and effective treatment option for obesity in patients on chronic immunosuppression. This data supports that bariatric surgery can be performed with minimal long-term complications and sustained weight loss despite the use of immunosuppression.