



Unveiling Weight Loss Trends And Complications In Body Contouring Surgery Among GLP-1 Receptor Analogs Users

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BACKGROUND

- The rising use of glucagon-like peptide-1 (GLP-1) receptor analogs has increased interest in body contouring surgery (BCS).
- Plastic surgeons are becoming more interested in these medications, which in turn has led them to prescribe or recommend their use to patients who have not reached their desired weight before surgery.
- We assessed GLP-1 use, weight loss patterns, and complications among patients who underwent BCS at our institution.

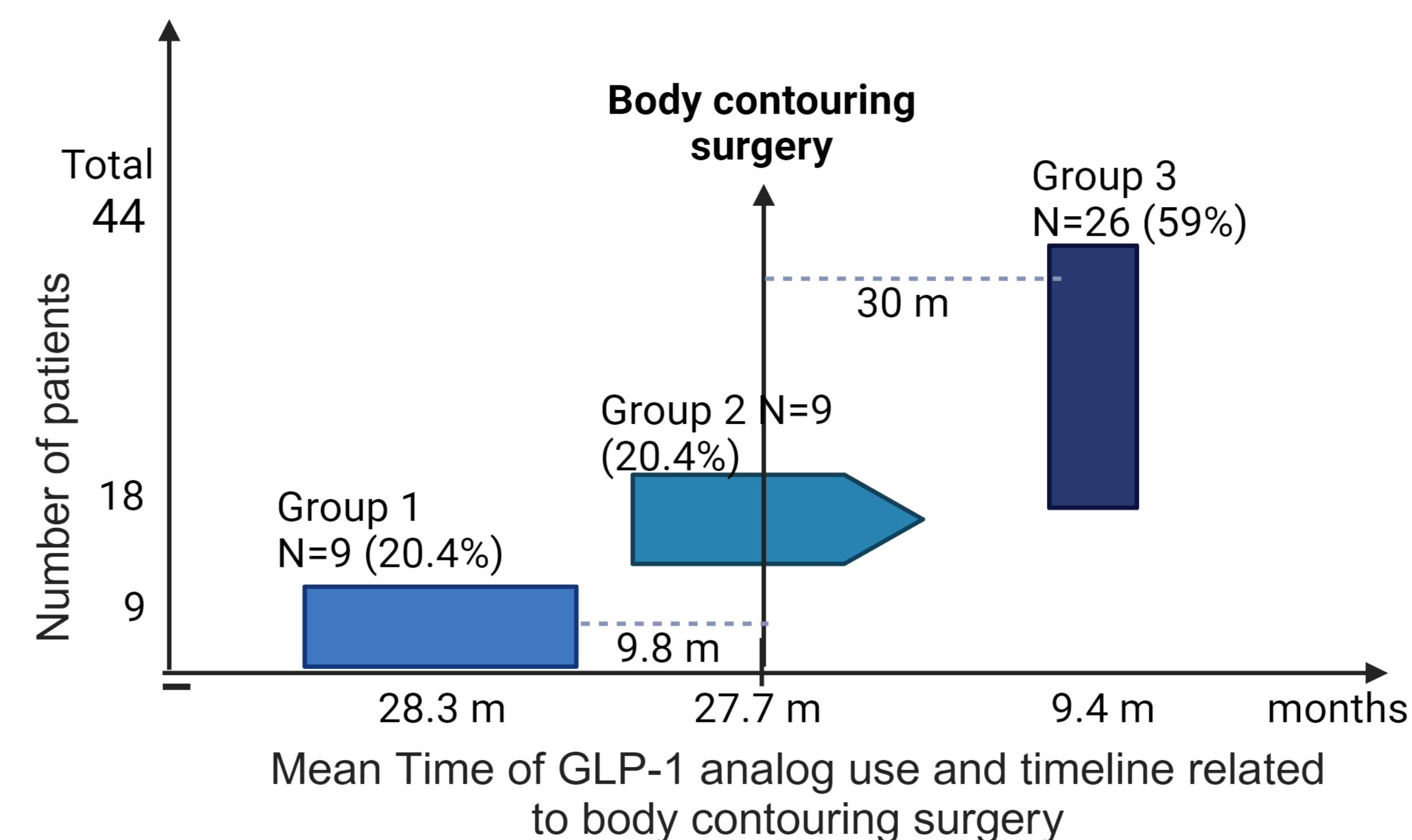
METHODS

- We conducted a retrospective analysis of body contouring surgery patients with GLP-1 prescriptions.
- Fisher's exact and chi-square tests analyzed categorical variables and repeated measures ANOVA evaluated changes in GLP-1 use and BMI over time.
- Postoperative complications were assessed using the Clavien-Dindo classification.
- Multiple linear regression predicted the final BMI based on age, pre-surgery BMI, and GLP-1 use.

RESULTS

- 44 patients were included. There was no statistically significant difference in group demographics, body contouring surgeries or follow-up.
- 3 (6.8%) patients had pancreatitis, and 3 (6.8%) had worsening constipation while using GLP-1 analogs.
- Linear regression analysis: BMI at surgery strongly predicts BMI at the last follow-up.
- Pre and postoperative GLP-1 usage is associated with a significant reduction in BMI. GLP-1 postoperative-only use had no significant impact. These factors accounted for 92.36% of the variance in the final BMI

FIGURE 1 Groups of patients categorized by timeline of GLP-1 use related to surgery



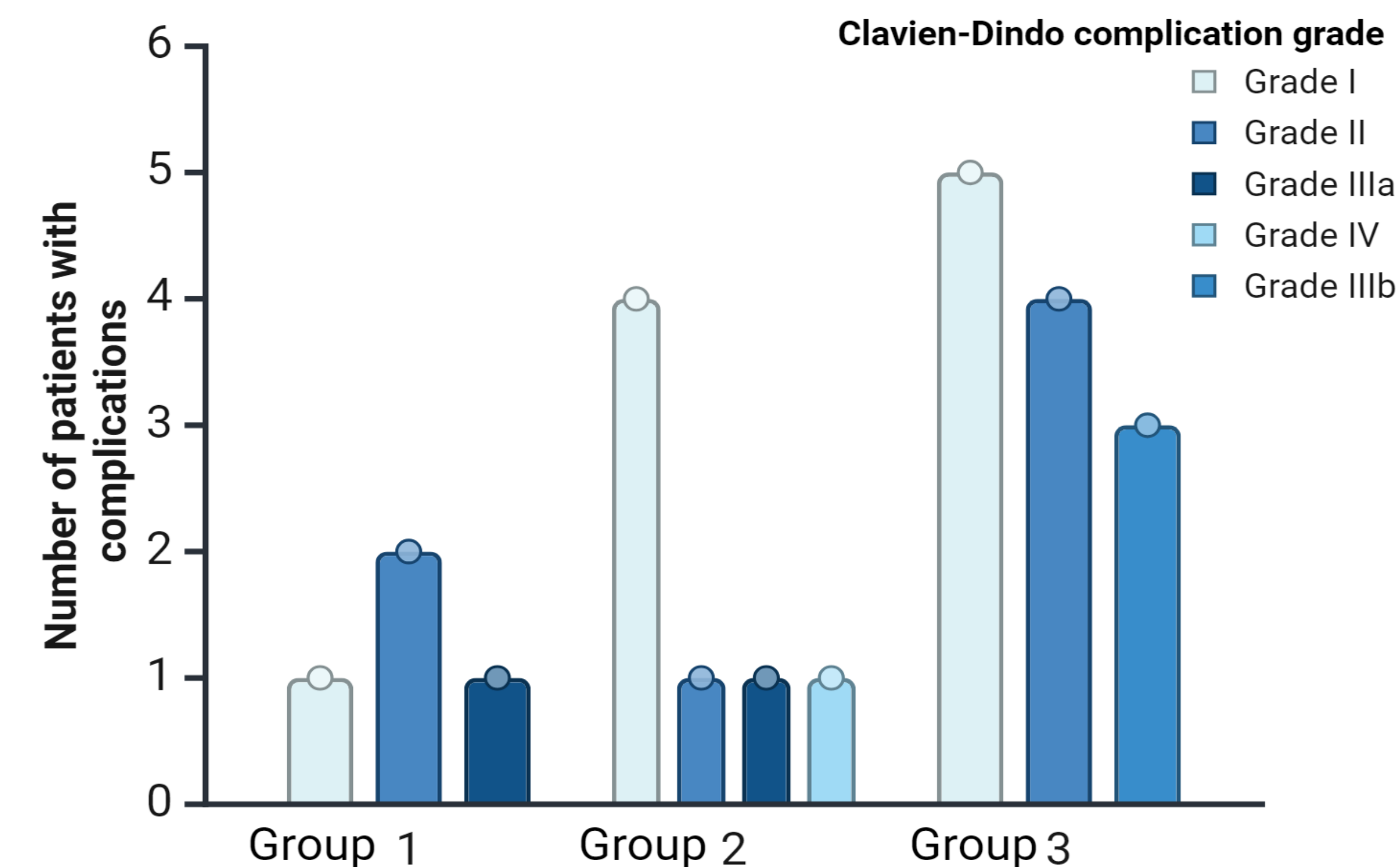
RESULTS

TABLE 1: Demographics comparison between GLP-1 use groups

Patients (n = 44)	Group 1	Group 2	Group 3	P value
Sex				0.55
Female (n = 41)	9 (100%)	9 (100%)	23 (88.5%)	
Male (n = 3)	0	0	3 (11.5%)	
Age (y)	46.6 ± 11.6	49.6 ± 7.88	50.8 ± 11.7	0.61
Type and number of surgeries				
Panniculectomy	8	6	18	0.63
Abdominoplasty	1	4	8	0.35
Brachioplasty	1	2	2	0.55
Thigh lift	0	2	1	0.20
Follow-up after surgery (SD)	3.92 m (1.75)	6.46 m (9.9)	6.7 m (7.31)	0.69
BMI at surgery (kg/m2)	30.6 ± 3.3	32.4 ± 5.3	32.8 ± 6.2	0.57
BMI 6 months after surgery (kg/m2)	23.9 ± 14.0	27.7 ± 11.4	33.7 ± 7.1	0.02 *
BMI last follow-up (kg/m2)	30.2 ± 3.4	30.4 ± 5.0	33.4 ± 7.4	0.30

BMI: body mass index, m: months, (SD): standard deviation, y: years

FIGURE 2: Complications per group using the Clavien-Dindo classification



RESULTS

TABLE 2: Linear regression to predict BMI at last follow-up based on age, BMI at surgery and GLP-1 use.

Risk factor	Estimate B	P value
Age	0.05	0.06
BMI at surgery	1.09	<0.001
GLP-1 Group 2	-1.93	0.03*
GLP-1 Group 3	0.46	0.54
Model variance explained	R ² =0.9236	

CONCLUSIONS

- Starting GLP-1 receptor analogs before BCS significantly reduced BMI six months after surgery. The BMI at the time of surgery is a strong predictor of the BMI at the last follow-up.
- Patients who started using GLP-1 analogs before undergoing body contouring surgery did not have more complications than patients who started the medication after surgery.
- GLP-1 analogs can be a safe aid for patients looking to reach their desired weight before body contouring surgery, however, its use should be guided by health care professionals to prevent complications related to the medication.