

THE ADDITION OF PERI-OPERATIVE GLP-1 AGONISTS DOES NOT IMPROVE EXCESS WEIGHT LOSS OR PREVENT WEIGHT REGAIN AFTER BARIATRIC SURGERY

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Introduction

Bariatric surgery has been shown to be the most effective intervention for weight loss. While bariatric surgery is superior to medical management alone, a significant portion of patients develop weight recurrence long-term or suboptimal weight loss (SWL). Weight recurrence (WR) likewise has been seen in patients following both sleeve gastrectomy and RYGB between 37-76%. Multiple strategies have been studied including additional bariatric surgeries, pharmacotherapy, and intensive psychological and lifestyle interventions, and recent data has shown significant weight loss after Semaglutide and Tirzepatide use. In this study, we aimed to examine the perioperative use of prescription medical weight loss medications and to study the possible synergistic effects between pharmacotherapy and bariatric surgery.

Methods

A retrospective analysis was conducted within our institution between January 2020 to January 2023. Patients were split into two groups, with one group having perioperative use of prescription Semaglutide, Liraglutide, or Tirzepatide within 6 months of surgery, and the other group who underwent bariatric surgery only. Primary outcomes included excess weight loss and weight regain at 3 months, 6 months, 12 months, 24 months, 36 months, and 48 months post-surgery. Secondary outcomes included total weight loss at 24 months post-surgery and resolution of pre-operative comorbidities including hypertension, obstructive sleep apnea, reflux, hyperlipidemia, and diabetes.

Results

	Control, n= 73 N(%)	GLP1 group, n= 69 N(%)	P-value
Age (median; years), [IQR]	46.4 [33.7-54.3]	47.5 [39.7-56.0]	0.21
Hispanic	48 (65.8)	35 (50.7)	0.07
White race	7 (9.6)	6 (8.7)	0.85
Male gender	18 (24.7)	15 (21.7)	0.70
Laparoscopic sleeve gastrectomy	37 (50.7)	35 (50.7)	1.0
Pre-op diagnosis of hypertension	42 (57.5)	52 (75.4)	0.03
Resolution of hypertension	13 (31.0)	17 (33.3)	0.20
Pre-op diagnosis of diabetes	4 (5.5)	18 (26.1)	0.0009
Resolution of diabetes	0 (0.0)	10 (55.6)	0.15
Initial A1C (median) [IQR]	5.2 [5.0-5.4]	5.6 [5.2-6.3]	<0.0001
Pre-op diagnosis of GERD	33 (45.21)	17 (24.6)	0.01
Resolution of GERD	7 (21.2)	9 (60.0)	0.01
Pre-op diagnosis of HLD	17 (23.3)	40 (58.0)	<0.0001
Resolution of HLD	7 (33.3)	13 (32.5)	0.94
Pre-op diagnosis of OSA	33 (45.2)	26 (37.7)	0.40
Resolution of OSA	6 (18.2)	7 (25.9)	0.01
Complication	2 (2.8)	6 (8.7)	0.16
Lost to follow-up	36 (50.0)	43 (63.2)	0.13

Table 1. Patients with perioperative GLP1 use had more medical comorbidities resolved with surgery

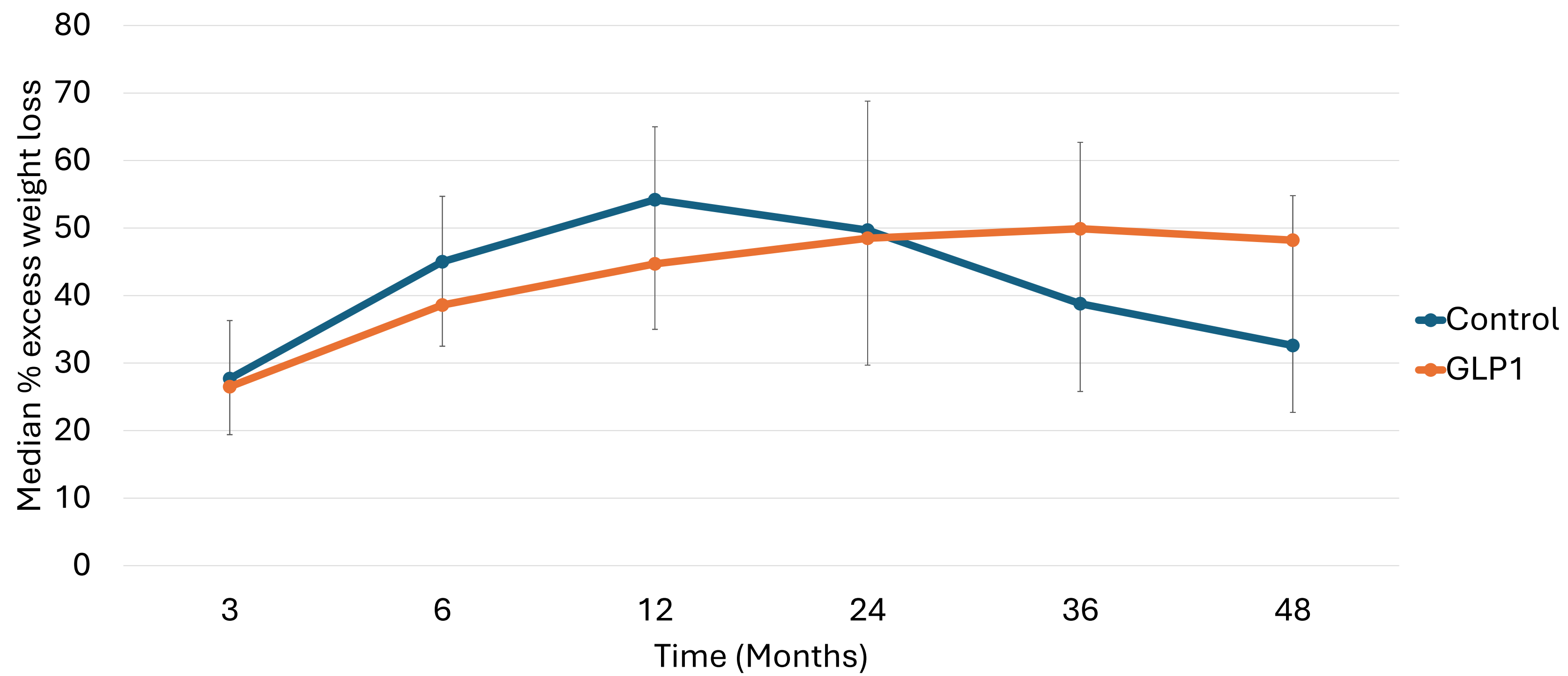


Figure 1. Patients with and without perioperative GLP1 use had similar percent excess weight loss

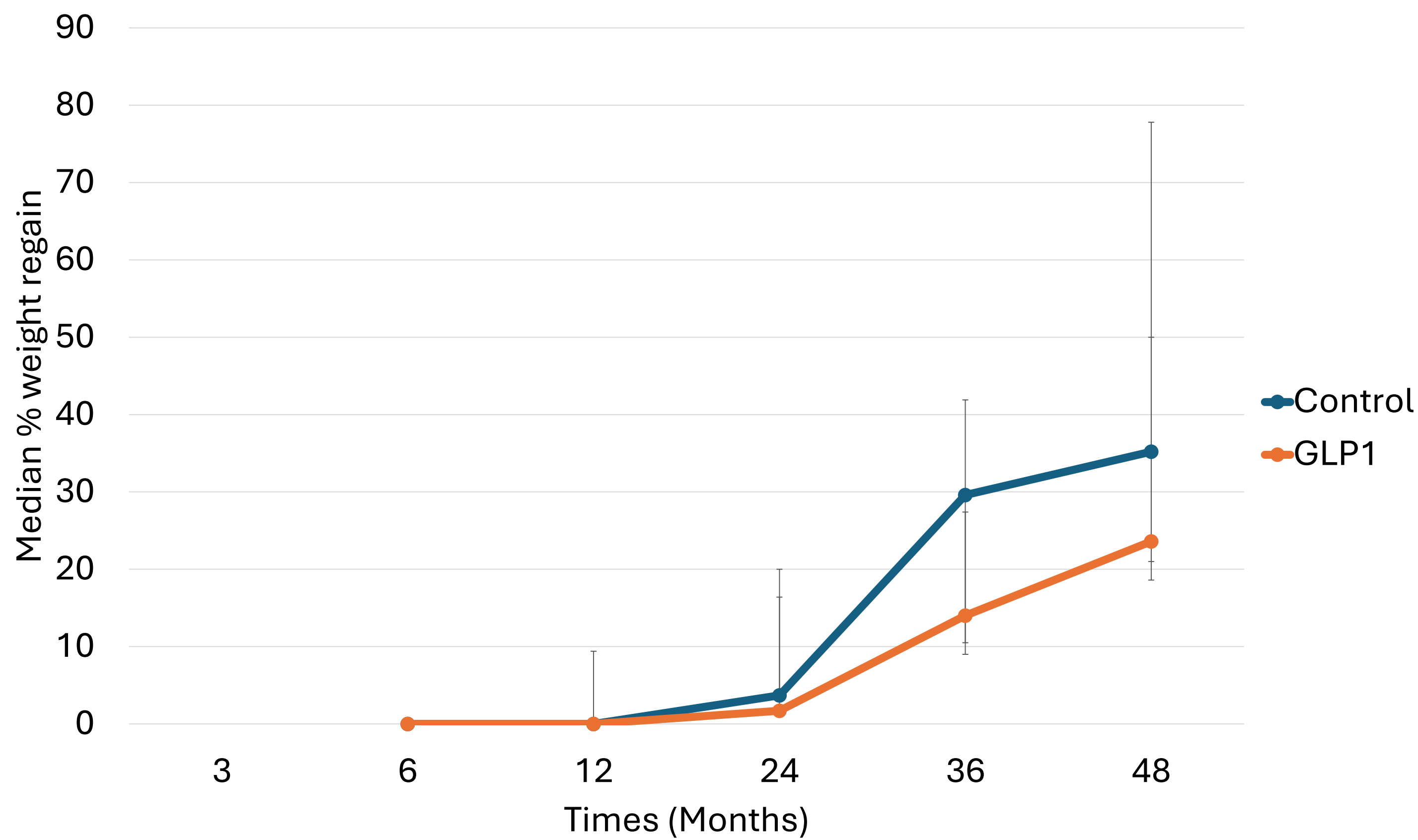


Figure 2. Patients with and without perioperative GLP1 use had similar percent weight regain

Conclusion

Patients with more significant medical comorbidities were more likely to have peri-operative GLP-1 agonist usage. However, the addition of a GLP-1 agonist did not show a benefit to excess weight loss and did not prevent weight recurrence after bariatric surgery.