Boosting Weight Loss after Revisional RYGB:

A Double-Blind- RCT of Liraglutide and Placebo use

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We have no potential conflict of interest to report

Background

Laparoscopic sleeve gastrectomy (LSG) has high reported revision rates **(10-22%)**

Weight regain and insufficient weight loss **(±70%)**

Revisional bariatric surgery → RYGB is the most popular performed.

But **revisional bariatric surgery** has worse outcomes than **primary bariatric surgery**

Study endpoints

Additional weight reduction with **liraglutide** after RRYGB compared to the RRYGB with **placebo** use.

Weight loss @1 months || 6 weeks || 6 months

&

Changes in metabolic biomarkers measured at the end of treatment

Liraglutide vs Placebo pens

Liraglutide (Saxenda)

Post-operative week-6
with
0.6 mg daily injections

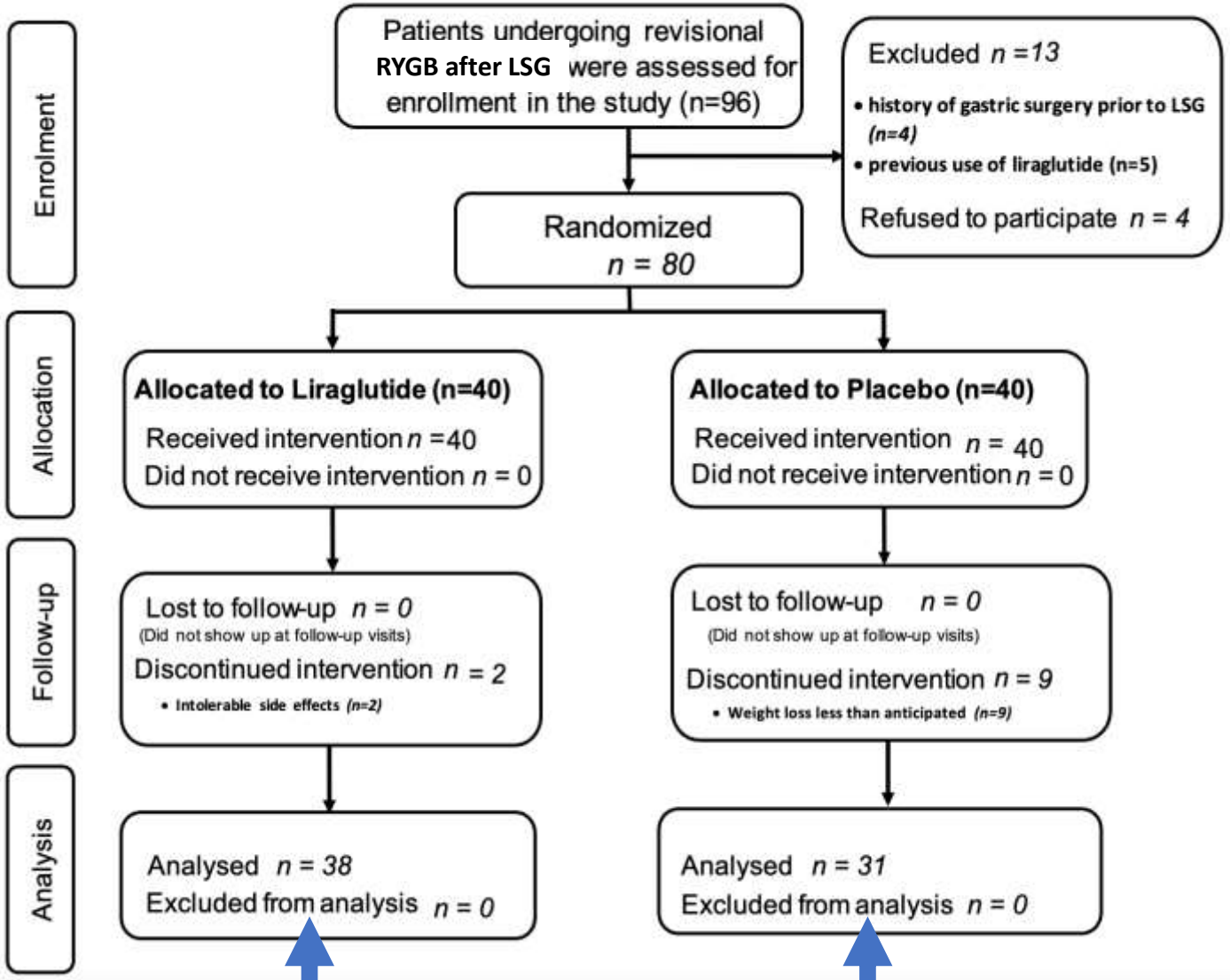
Max of 3 mg daily after 5 weeks, continued for 24 weeks.

Placebo (NALC 0.9%)

Post-operative week-6
with
0.6 mg daily injections

Max of 3 mg daily after 5 weeks, continued for 24 weeks.

CONSORT Flow Diagram

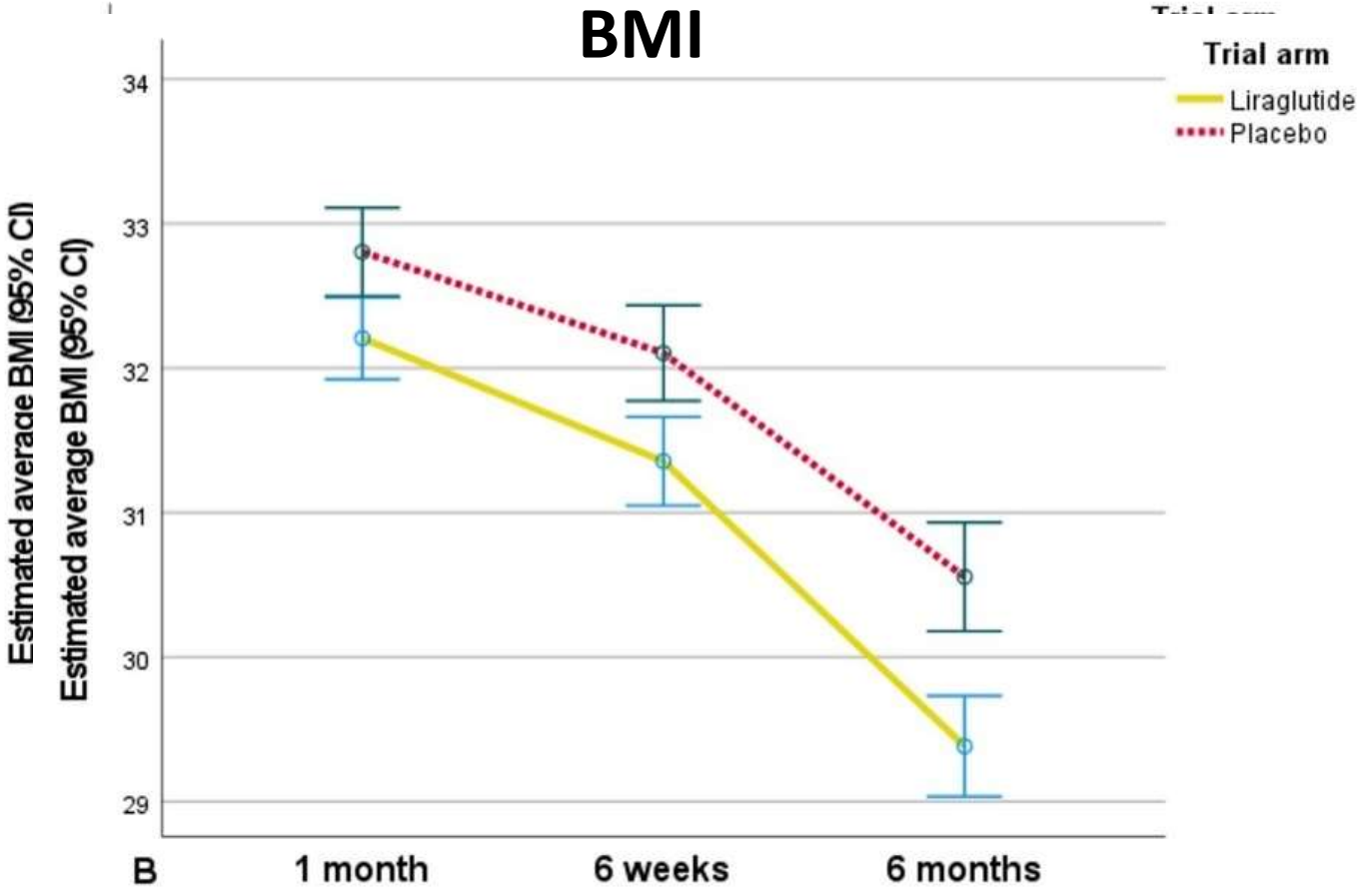


Results
Weight loss

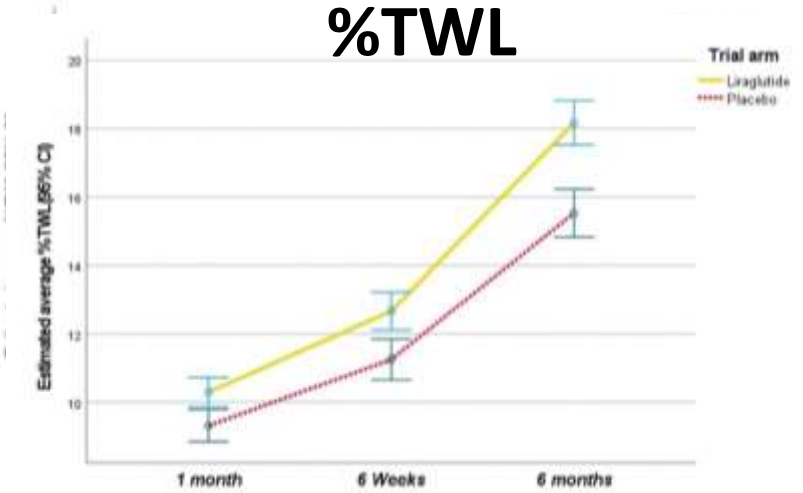
Liraglutide %TWL		Delta %TWL	Placebo %TWL	
6 weeks	12.66±1.69	+1.41	6 weeks	11.25±1.62
6 months	18.17±2.17	+2.64	6 months	15.53±1.64

Liraglutide %EWL		Delta %EWL	Placebo %EWL	
6 weeks	41.89±5.97	+5.42	6 weeks	36.47±5.06
6 months	60.21±8.40	+9.8	6 months	50.41±5.37

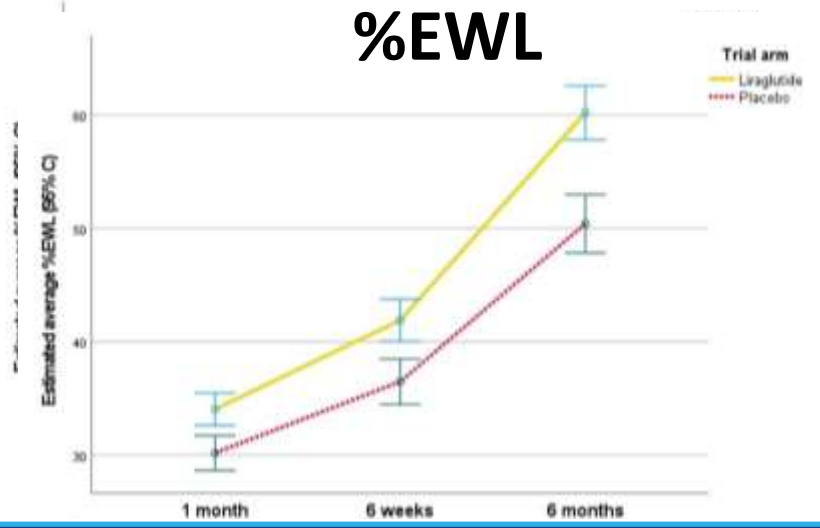
BMI


Trial arm
Liraglutide
Placebo
Estimated average BMI (95% CI)
34
33
32
31
30
29
B
1 month
6 weeks
6 months

%TWL


Trial arm
Liraglutide
Placebo
1 month
6 Weeks
6 months

%EWL


Trial arm
Liraglutide
Placebo
1 month
6 weeks
6 months

Results
metabolic biomarkers

- Lipid profile, fasting blood sugar, HbA1c, fasting insulin levels, leptin, ghrelin, and PYY levels

NO Significant differences

- GLP-1 **decreased** significantly in the **liraglutide** cohort (p=<0.001), *(GLP-1 increased in placebo)*

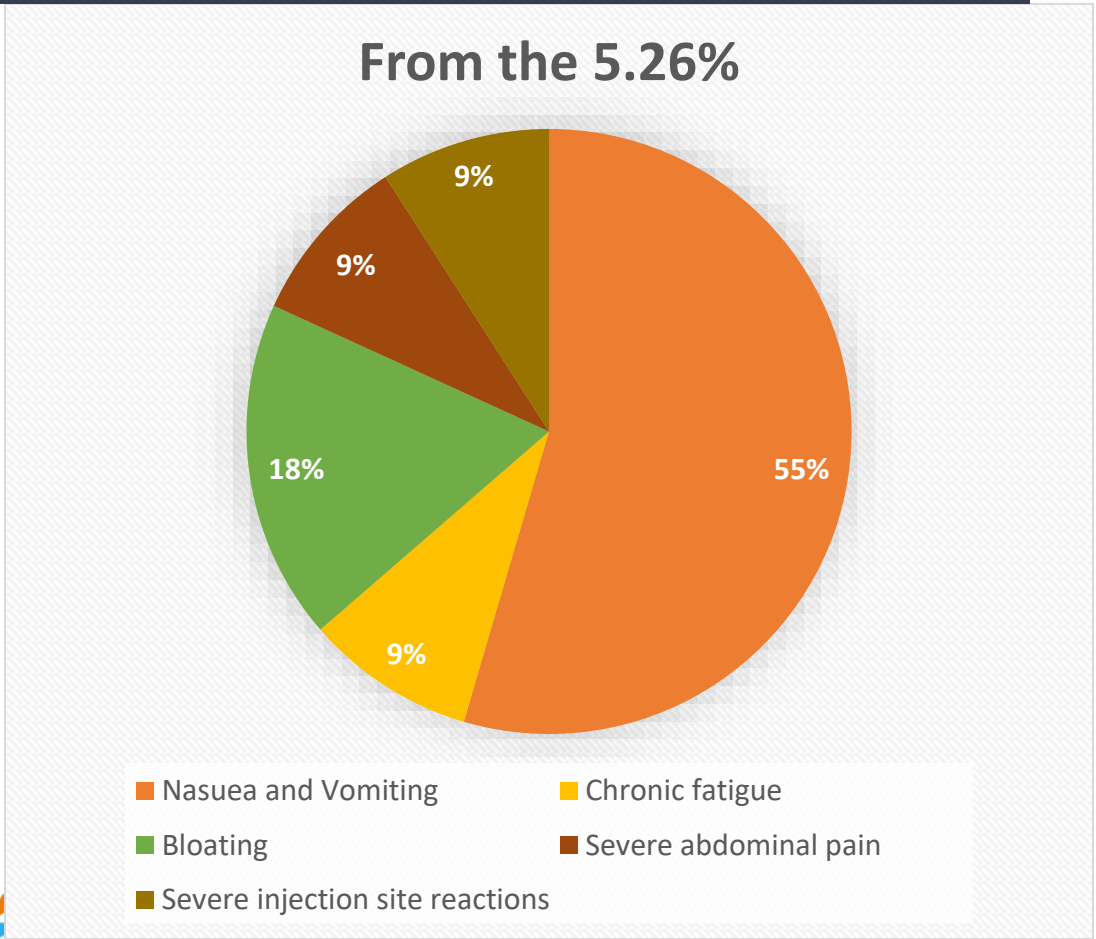
- GIP increased in both cohorts, with a **significantly more increase** in the **liraglutide** cohort (p=.014)

Severe and intolerable side effects

- 5.26% in the liraglutide group after 3 and 4 weeks.

- 81.6% could reach and tolerate the 3mg/day dose,

- 18.4% continued lower doses (range 2.4-1.2 mg/day).



Limitations

- A longer follow-up is needed to assess the durability of the weight loss outcomes.
- The resolution of diabetes mellitus should be confirmed when the patients are no longer on medications.

Conclusion

- Adjunctive use of liraglutide has significantly added weight loss and effect on associated medical problems with good tolerability.
- The added value from liraglutide use can help overcome the inherently lower weight loss outcomes of RBS.

Thank you

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