Semaglutide Study Notes

For those interested in learning more about independent, unbiased studies regarding the effectiveness of newer pharmacologic adjuncts for weight reduction.

Studies concerning two currently available medications:

- Semaglutide a GLP-1 Agonist (Blocker)
  (Brand names are Ozempic, Wegovy & others
- Tirzepatide a GLP-1 Agonist + GIP Agonist
  (Brand names are Monjour & Zepbound)

Once-Weekly Semaglutide in Adults with Overweight or Obesity

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Abstract

BACKGROUND

Obesity is a global health challenge with few pharmacologic options. Whether adults with obesity can achieve weight loss with once-weekly semaglutide at a dose of 2.4 mg as an adjunct to lifestyle intervention had not been confirmed at time this study was initiated. .

In this double-blind trial, we enrolled 1961 adults with a body-mass index (the weight in kilograms divided by the square of the height in meters) of 30 or greater (≥27 in persons with ≥1 weight-related coexisting condition), who did not have diabetes, and randomly assigned them, in a 2:1 ratio, to 68 weeks of treatment with once-weekly subcutaneous semaglutide (at a dose of 2.4 mg) or placebo, plus lifestyle intervention. The coprimary end points were the percentage change in body weight and weight reduction of at least 5%. The primary estimate assessed effects regardless of treatment discontinuation or rescue interventions.

RESULTS

The mean change in body weight from baseline to week 68 was −14.9% in the semaglutide group as compared with −2.4% with placebo, for an estimated treatment difference of −12.4 percentage points (95% confidence interval [CI], −13.4 to −11.5; P<0.001). More participants in the semaglutide group than in the placebo group achieved weight reductions of 5% or more (1047 participants [86.4%] vs. 182

[31.5%]), 10% or more (838 [69.1%] vs. 69 [12.0%]), and 15% or more (612 [50.5%] vs. 28 [4.9%]) at week 68 (P<0.001 for all three comparisons of odds). ***The change in body weight from baseline to week 68 was −15.3 kg in the semaglutide group as compared with −2.6 kg in the placebo group*** (estimated treatment difference, −12.7 kg; 95% CI, −13.7 to −11.7). ***Participants who received semaglutide had a greater improvement with respect to cardiometabolic risk factors and a greater increase in participant- reported physical functioning from baseline than those who received placebo. Nausea and diarrhea were the most common adverse events with semaglutide; they were typically transient and mild-to-moderate in severity and subsided with time***. More participants in the semaglutide group than in the placebo group discontinued treatment owing to gastrointestinal events (59 [4.5%] vs. 5 [0.8%]).

CONCLUSIONS

In participants with overweight or obesity, 2.4 mg of semaglutide once weekly plus lifestyle intervention was associated with sustained, clinically relevant reduction in body weight.
(Funded by Novo Nordisk; STEP 1 ClinicalTrials.gov number, NCT03548935).

Obesity is a chronic disease and global public health challenge with complications such as type 2 diabetes, cardiovascular disease and nonalcoholic fatty liver. Obesity can lead to insulin resistance, hypertension, and dyslipidemia, and reduced life expectancy. More recently, obesity has been linked to increased numbers of hospitalizations, the need for mechanical ventilation, and death in persons with coronavirus disease 2019 (Covid-19).

Although lifestyle intervention (diet and exercise) represents the cornerstone of weight management, sustaining weight loss over the long term is challenging.9 Clinical guidelines suggest use of adjunctive pharmacotherapy, particularly for adults with a body-mass index (BMI, the weight in kilograms divided by the square of the height in meters) **of 30 or greater, or 27 or greater in persons with coexisting conditions**.
The above study was published in 2021, the below listed study from 2023 will be included in this addendum when I finish this NLT 2/28/24

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