What's the Weight with GLP-1 Agonists for Weight Loss?

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Financial Disclosure

- I have had no financial relationship over the past 24 months with any commercial sponsor with a vested interest in this presentation.

Pharmacist learning objectives

- Summarize recent updates with GLP-1 agonist use for weight loss.
- Differentiate which patient's would be appropriate for glp-1 agonist use for weight loss
- Educate patients on use of glp-1 agonists & how to it relates to weight reduction

Technician Learning objectives

- Identify correct brand/generic names for glp-1 agonists used in weight loss
- List which glp-1 agonists are FDA approved for weight loss
- Recognize the difference among glp-1 agonists for weight loss

Glp-1 agonists for weight loss

- SCALE trial
  - Liraglutide
- STEP-1 trial
  - Semaglutide
- SURMOUNT-1 Trial
  - Tirzepatide

SCALE Trial

- Study Design
  - Randomized
  - Placebo
  - Blinded

SCALE Trial

- Patients were randomly assigned in a 2:1 ratio, to receive once-daily subcutaneous injections of Liraglutide: starting at a dose of 0.6 mg weekly, increasing by 0.6-mg increments to 3.0 mg, and indicates the groups were blinded.
- The two groups being blinded were the placebo group and the group that received Liraglutide. Those who did not receive the medication were given the placebo throughout the dosing increase.
- Patients were classified according to prediabetes status and BMI (≥30 vs. <30)

SCALE Trial

- At 56 weeks, patients in the Liraglutide group who did not have prediabetes were randomly assigned in a 1:1 ratio to continue receiving Liraglutide or to switch to placebo for 12 weeks
- Subcutaneous liraglutide (n= 2487) vs placebo (n=1244)

SCALE Trial

- Total number of enrollees
  - 3731
- Mean Duration of follow-up
  - 1.5 years with a 2 year extension
- Mean patient age
  - 45 years
- Percentage female
  - 78%

Inclusion

- Patients 18 years or older
- Stable Body Weight
- BMI of 30 or higher
- BMI 27 or higher if the patient had treated or untreated dyslipidemia or hypertension

Exclusion

- Diabetes type 1 or 2
- Medications causing significant weight loss or weight gain
- Bariatric surgery
- History of pancreatitis
- History of major depression or other severe psychiatric disorder
- Family or personal history of multiple neoplasia type 2 or familial medullary thyroid carcinoma

Primary Outcomes

- **Percent change in body weight (%) after 56 weeks**
  - Liraglutide : - 8 %
  - Placebo : - 2.6 %
    - P < 0.001
- **Weight loss (more than 5% of their body weight) after 56 weeks**
  - Liraglutide : 63.2 %
  - Placebo : 27.1%
    - P < 0.001

- **Weight loss (more than 10% of their body weight) after 56 weeks**
  - Liraglutide : 33.1%
  - Placebo : 10.6 %
    - P < 0.001

Secondary Outcomes

- Body mass index percent reduction after 56 weeks
- Waist circumference (cm) after 56 weeks
- HDL levels (%) after 56 weeks
- VLDL levels (%) after 56 weeks
- Non-HDL levels (%) after 56 weeks
- Triglyceride levels (%) after 56 weeks
- Free fatty acid levels (%) after 56 weeks

Secondary Outcomes

- Systolic blood pressure (mm Hg) after 56 weeks
- Diastolic blood pressure (mm Hg) after 56 weeks
- Pulse (beats/min) after 56 weeks
- Glycated hemoglobin (%) after 56 weeks
- Fasting glucose (mg/dL) after 56 weeks
- Fasting insulin (%) after 56 weeks
- Fasting C-peptide (%) after 56 weeks

Saxenda 6 mg/ml (liraglutide)

- FDA approved for patients 12 years and older
- Dosing
  - 3 mg subcutaneously once daily
    - Start at 0.6 mg daily, increase dose weekly by 0.6 mg to max dose of 3 mg daily.
- Supplied
  - 3 ml pens – 5 pens in a box (pen needles need separate prescription)
- Cost
  - AWP : $1,618.82
- Copay card available
  - Max $200 per 30 day supply

STEP-1 Trial

- Study Design
  - Randomized
  - Parallel
  - Placebo
  - Double Blind

STEP-1 Trial

- Patients with obesity were randomized to semaglutide 2.4 mg subcutaneously one weekly (n= 1,306) vs placebo (n=655) for 68 weeks

- All participants received lifestyle intervention

STEP-1 Trial

- Total number of enrollees
  - 1,961
- Duration of follow-up
  - 68 weeks
- Mean patient age
  - 46 years
- Percentage female
  - 73%
- Percentage with pre-diabetes
  - 45%

Inclusion

- Obese adults : Body Mass index (BMI) ≥ 30 kg/m²
- Overweight adults BMI ≥ 27 kg/m² with hypertension, hyperlipidemia, obstructive sleep apnea, or cardiovascular disease

Exclusion

- Diabetes type 1 or 2 or glycated hemoglobin ≥ 6.5%
- Previous surgical obesity treatment
- History of chronic pancreatitis or acute pancreatitis within 180 days of enrollment
- Use of anti-obesity medication within 90 days of enrollment

Co-Primary Outcomes

- Mean change in body weight from baseline to 68 weeks
  - Semaglutide Group: - 14.9%
  - Placebo Group: - 2.4%
    - $P < 0.0001$

Co- Primary Outcomes

- Weight loss of 5 %
  - Semaglutide Group: - 86.4%
  - Placebo Group: - 31.5%
    - P < 0.0001

Secondary Outcomes

- Adverse events :
  - Semaglutide Group: 89.7% Vs Placebo Group: 86.4%
- Serious adverse events
  - Semaglutide Group: 9.8%
  - Placebo Group: 6.4%
- Discontinuation of study drug due to gastrointestinal events
  - Semaglutide Group: 4.5%
  - Placebo Group: 0.8 %

Wegovy (Semaglutide)

- FDA approved for patients 12 years and older
- Dosing
  - 0.25 mg once weekly x 4 weeks
  - 0.5 mg once weekly x 4 weeks
  - 1.0 mg once weekly x 4 weeks
  - 1.7 mg once weekly x 4 weeks
  - 2.4 mg once weekly x 4 weeks
- Supplied
  - 4 single use auto injector- 0.5 ml pens – 4 pens in a box

Wegovy (Semaglutide)

- Cost
  - AWP : $1,618.82
- Copay card available
  - Max $225 per 28 day supply if covered
  - Max $500 off per 28 day supply if not covered

SURMOUNT-1 Trial

- Study Design
  - Phase 3
  - Multi Center
  - Double-blind
  - Placebo-controlled

SURMOUNT-1 Trial

- Patients were randomized in a 1:1:1:1 fashion to tirzepatide 5 mg (n=630) , 10 mg (n=636), or 15 mg(n=630) , or placebo (n=643) administered once weekly for 72 weeks in addition to lifestyle intervention.

- Tirzepatide was initiated at 2.5 mg weekly as increased by 2.5 mg every 4 weeks

SURMOUNT-1 Trial

- Total number of enrollees
  - 2,539
- Duration of follow-up
  - 72 weeks
- Mean patient age
  - 44.9years
- Percentage female
  - 67.5%
- White Race
  - 70.6%

Inclusion

- Age ≥ 18 years
- Body mass index (BMI) ≥ 30 kg/m² or ≥ 27 kg/m² and a weight-related complication
- One or more unsuccessful dietary effort to lose weight

Exclusion

- Diabetes type 1 or 2
- Change in body weight of > 5 kg within 90 days before screening
- Previous or planned surgical treatment for obesity
- Medication treatment that promoted weight loss 90 days prior to screening

SURMOUNT-1 Trial

- Mean Body weight
  - 104.8 kg (mean BMI: 38 kg/m²)
- Mea n weight circumference
  - 114.1 cm
- Average duration of obesity
  - 14.4 years
- Prediabetes at baseline
  - 40.6 %

Primary outcomes

- Change in body weight from baseline to 72 weeks
  - Tirzepatide 5 mg Group: - 15 %
  - Tirzepatide 10 mg Group: - 19.5%
  - Tirzepatide 15 mg Group: - 20.9%
  - Placebo Group: - 3.1 %
    - $P < 0.0001$

Primary outcomes

- Weight Reduction of ≥ 5% at week 72
  - Tirzepatide 5 mg Group: 85.1%
  - Tirzepatide 10 mg Group: 88.9%
  - Tirzepatide 15 mg Group: 90.9%
  - Placebo Group: 34.5%

Secondary Outcomes

	Tirzepatide 5 mg	Tirzepatide 10 mg	Tirzepatide 15 mg	Placebo
Weight reduction of 10 % or more at week 72 – percentage of participants	68.5 %	78.1 %	83.5 %	18.8 %
Weight reduction of 15 % or more at week 72 – percentage of participants	48 %	66.6 %	70.6 %	8.8%
Weight reduction of 20 % or more at week 72 – percentage of participants	30 %	50.1 %	56.7 %	3.1%
Weight reduction of 25 % or more at week 72 – percentage of participants	15.3 %	32.3 %	36.2%	1.5%

Secondary Outcomes

- Change in baseline to week 72 in waist circumference
  - Tirzepatide 5 mg Group: - 14 cm
  - Tirzepatide 10mg Group: - 17.7 cm
  - Tirzepatide 15 mg Group: - 18.5 cm
  - Placebo Group: - 4 cm

Serious Adverse Events/ Discontinuation

- Serious Adverse events
  - 5 mg: 6.3%
  - 10 mg: 6.9%
  - 15 mg: 5.1%
  - Placebo: 6.8%
- Treatment discontinuation due to adverse events
  - 5 mg: 4.3%
  - 10 mg: 7.1 %
  - 15 mg: 6.2 %
  - Placebo: 2.6%

Mounjaro (Tirzepatide)

- NOT FDA approved yet
- Dosing
  - 15 mg subcutaneously once weekly
  - Start at 2.5 mg once weekly increase dose every 4 weeks by 2.5 mg to max dose of 15 mg once weekly.
- Supplied
  - 4 single use auto injector- 0.5 ml pens – 4 pens in a box
- Cost
  - AWP : $1,227.65

Pharmacist questions

- In the SURMOUNT-1 TRIAL what percentage of patients of the 15 mg group had a reduction in body weight of 20 % or more

  - A: 13 % B: 25% C: 57% , D: 46%

Answer

- C: 57%

Pharmacist questions

- T/F a patient with a BMI of 26 and hypertension is an appropriate candidate for semaglutide

Answer

- False

Pharmacist questions

- T/F Semaglutide is delivered subcutaneously via an autoinjector pen

Answer

- True

Technician Questions

- T/F Wegovy is the brand name for liraglutide

Answer

- False

Technicians Questions

- T/F tirzepatide is FDA approved for Weight Loss

Answer

- False

Technician Questions

- Which of the following medications max dose is 2.4 mg once weekly
  - A: liraglutide, B: semaglutide C: tirzepatide

Answer

- B: semaglutide

References

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Questions