Semaglutide Causes Weight Loss and Symptom Improvement in Secondary Lymphedema

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Purpose

1. Understand the demographics and symptoms of patients in California's Central Valley with secondary lymphedema.

2. Investigate the effects of semaglutide in obese and/or T2DM patients with secondary lymphedema.

Methods

- Patients in California's Central Valley at 6 surgical clinics with secondary lymphedema were surveyed to assess demographics and symptoms. Patients on Semaglutide treatment for obesity and/or T2DM were monitored for their diabetes management, weight loss progress, and lymphedema symptoms compared to patients who served as controls.
- Treated patients completed pre-semaglutide questionnaires and follow-up post-semaglutide questionnaires at 3, 6, and 9 months along with medical assessment. Control patients completed similar questionnaires.
- The questionnaires investigated patients' subjective feelings regarding their lymphedema symptoms and management using a Likert-scale; quantitative leg measurements were collected and blood work reviewed at these appointments.
- Paired difference t-tests, chi-squared tests, and independent sample t-tests were performed.

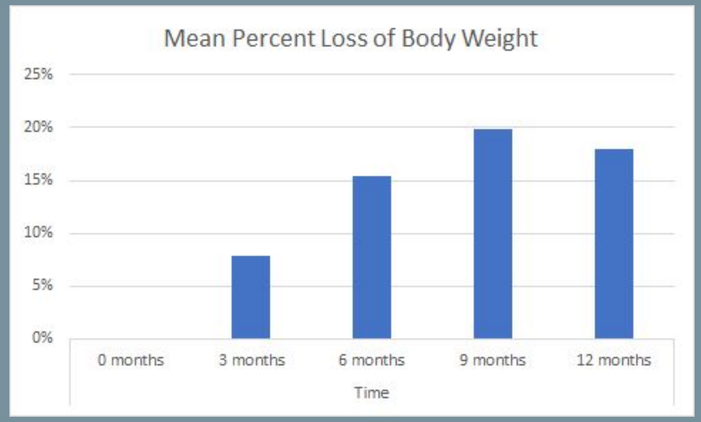


Figure 1: Average percent of body weight loss on semaglutide over time

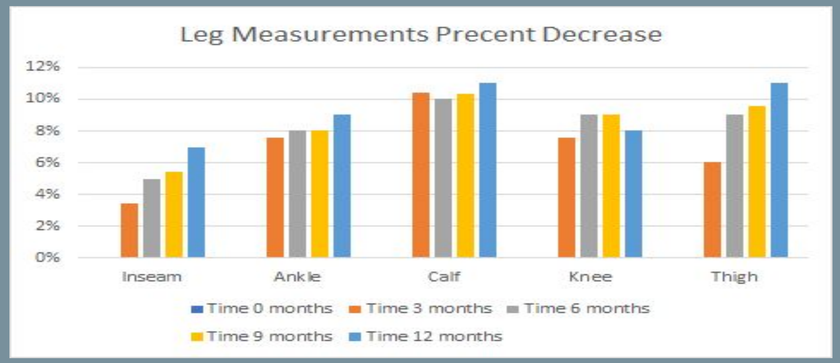


Figure 2: Leg measurement percent decrease over a period of 12 months

Conclusion

Semaglutide was shown to significantly decrease leg circumference and improve weight loss, T2DM management, and secondary lymphedema functional, physical and psychosocial symptoms. There is exciting potential to use this medication to improve the management of patients suffering from lymphedema.

Results

- 50 patients, aged 18-75 years, completed the surveys evaluating secondary lymphedema: 90% female, 69% Hispanic, 45% Spanish speaking, 42% disabled, 57 % employed, 54% income range below 30 thousand dollars, and average BMI of 40.
- Both treated patients (n=35) and controls (n=15) noted the most common symptoms were leg swelling ($\bar{x}$=3.2, d= 1.3), leg pain ($\bar{x}$=3.2, d=1.6), loss of daily function ($\bar{x}$=3, d=1.4), and negative body image ($\bar{x}$=4.4, d=0.54).
- Patients in the semaglutide group receiving >3 months of treatment compared to controls demonstrated: 55% patients in the treatment group had a 10% weight loss vs 3% in the control group (average BMI reduction by 11% vs Controls by 2.5%, $p<0.05$) and improved subjective feelings about their lymphedema symptoms: leg swelling ($\bar{x}$=2.4, d=0.45 vs $\bar{x}$=3.2, d=1.3, $p<0.05$), leg pain ($\bar{x}$=2.2, d=0.45 vs $\bar{x}$= 3.2, d= 1.6, $p<0.05$), and heaviness ($\bar{x}$=2.2, d=0.45 vs $\bar{x}$=3, d=1.56, $p<0.05$).
- Improvement in diabetes management was demonstrated by an average of 0.9 % decrease in A1C values compared to controls 0.1 %, $p<0.05$.
- Patients on semaglutide noted 6 cm decrease in the circumference of the leg, knee, calf, and ankle compared to 2 cm in controls, $p<0.05$.

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