HIGH LEVELS OF TREATMENT SUCCESS SEEN WITH COMBINED USE OF TESAMORELIN AND GLP1-RAs IN PEOPLE WITH HIV

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D. LEE [1], C. MARTORELL [2], E. CALDERON [3], Z. HENRY [4], O. DOUGLAS [5], C. CALDJI [6], C.S. McGARY[6] AND K. ANSTETT [6]

[1]UCSD Medical Center - Owen Clinic, San Diego, USA; [2]The Research Institute, Springfield, USA; [3]AHF - Manhattan Midtown , USA; [4]AHF Northpoint, Fort Lauderdale, USA, [5]AHF Healthcare Center – Chelsea, NYC, USA [6]Medical Affairs Theratechnologies Inc, Montréal, Canada.

Background

- Recent studies demonstrate substantial weight gain and excess visceral abdominal fat (EVAF) accumulation among people with HIV (PWH) on modern antiretroviral regimens.[1-3]
- Glucagon-like peptide-1 receptor agonists (GLP1-RAs) are rapidly becoming the standard of care for obesity management in the general population.
- Tesamorelin, an analog of growth-hormone-releasing-hormone, is the only approved medication to treat EVAF in PWH.[4]
- Given the distinct mechanisms of action and targets of tesamorelin and GLP-1RAs, the use of the two in combination is of increasing interest.

What are the real-world clinical outcomes and patient journeys of PWH who have been treated with tesamorelin and a GLP-1RA?

Methods

- Cases were submitted by HCPs for patients in their practice, deidentified, who had been on a combination of tesamorelin and a GLP-1 RA agent for a minimum of 6 months.
- Patient information was collected at the following timepoints:(1) Baseline - time of initial agent discussion; (2) Addition of second agent; (3) Post 6 months on combination therapy.
- Patient data collected included demographics, anthropometric measures (weight, BMI waist circumference, hip circumference), labs (including cholesterol, ALT, fasting glucose, Hba1c, and blood pressure) as well as clinical decision points.

Results

- Among the 7 cases, the majority were male (sex at birth), Caucasian, had complex medical histories, polypharmacy and an average of 27 years of HIV infection.
- At baseline, the majority of patients were overweight by BMI (mean 27.8 kg/m^2) with an elevated waist circumference (WC; 42.0 in), indicative of excess visceral adiposity.
- Tesamorelin was initiated first in all cases to address EVAF, with mean reduction in WC of 1.3 in (3.1%) from baseline. The principal reasons for adding a GLP-1-RA included improving BMI and diabetic control . 6/7 patients achieved these goals.
- GLP1-RAs were added 3 months to 5 years following initiation of tesamorelin, and patients had been on combination use ranging from 6-42 months.
- Following at least 6 months of combination therapy, patients showed mean reductions in: weight (-13lbs), BMI (-2.2 kg/m2), WC (-3.4 in) and improvement in metabolic parameters. Combination therapy is ongoing in most of the patients (6/7).

Table 1. Baseline and Follow Up Measures: Means (SEM)

Measure	Baseline	Addition of second agent	6+ month follow-up
Age (years)	61		
Weight (lbs)	186 (6.94)	179.7 (7.54)	173 (4.72)
BMI (kg/m^2)	27.8 (1.26)	26.8 (1.11)	25.6 (0.87)
Waist circumference (in)	42.0 (1.73)	40.7 (1.4)	38.6 (0.36)
Hip circumference (in)	38.9 (0.8)	37.9 (0.75)	37.0 (0.62)
Viral load (copies/mL)	81.3 (38.3)	66.6 (37.2)	
CD4$^+$ T-cells (cells/mm^3)	851 (112.8)	761.2 (119.54)	
Duration of HIV infection (years)	27.4 (1.90)		
Triglycerides (mg/dl)	193.5 (66.8)	154.7 (46.63)	124.7 (30.65)
Cholesterol (mg/dl)	182.8 (22.0)	139.3 (15.89)	132.5 (9.34)
HDL (mg/dl)	44.1 (6.61)	58.0 (15.07)	49.3 (5.85)
LDL (mg/dl)	84.3 (13.4)	62.7 (11.15)	53.0 (8.51)
ALT (U/L)	36.8 (5.85)	31.7 (2.66)	33.6 (5.97)
AST (U/L)	35.8 (4.11)	30.3 (2.03)	29.0 (3.73)
Fasting blood glucose (mg/dl)	126.8 (7.69)	112.3 (13.49)	99.8 (12.57)
HbA1c (%)	6.1 (0.24)	6.2 (0.42)	5.5 (0.16)
Blood pressure (mmHg)	131/85	122/80	121/78

Table 2. Patient Medical History

Participant	Medical history
1	HIV/AIDS, heart failure, non-ischemic cardiomyopathy, polycythemia, pre-diabetes, arthritis, hearing loss, arrhythmias, hypertension, episodic migraines, hypogonadism, erectile dysfunction, cervical radiculopathy, lipodystrophy, overweight, HIV lymphadenopathy, history of anal cancer, depression, hyperlipidemia, hypothyroidism, peripheral neuropathy.
2	HIV for 30 years, depression, diverticular disease, benign prostatic hypertrophy, hypertension, GERD, gynecomastia, hyperlipidemia, osteoporosis, obesity, lipodystrophy, avascular necrosis of hip, abdominal wall lipomas, hypothyroidism, Type 2 diabetes.
3	HIV, lipodystrophy, borderline personality disorder, HPV, chronic sinusitis, HSV infection, type 2 diabetes, major depressive disorder, fatty liver, hemorrhoids, generalized anxiety disorder, GERD (s/p laparoscopic fundoplication), esophagitis, obstructive sleep apnea, hypogonadism.
4	HIV infection, atopic dermatitis, essential hypertension, HPV, discoid lupus, psoriasis, genital warts, GERD, hyperlipidemia, type 2 diabetes, coronary artery disease.
5	HIV; Pre-diabetes; hyperlipidemia; asthma; depression/anxiety; HBP; pain; GERD; lipodystrophy; obesity.
6	AAA 3-5.5, anejaculation, major depressive disorder, PTSD, adjustment disorder with mixed emotional features, ED, dysplasia of the anus, hypochondriasis, lipodystrophy, hypogonadism, multiple lung nodules, placement of stent in coronary artery, non traumatic rupture of muscle, thyroid nodule, adenoidectomy, hemorrhoidectomy.
7	HIV/chronic HBV, lipodystrophy, prediabetes, increase in BMI.

Figure 1: Changes in anthropometric measures over time

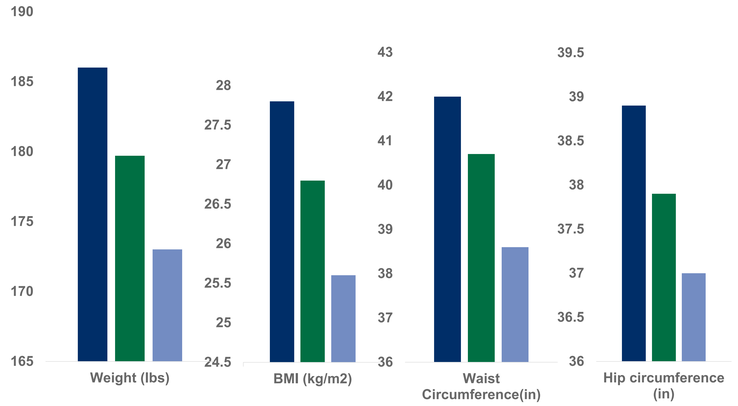
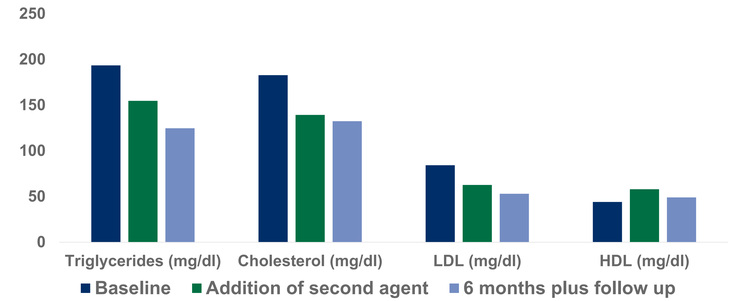


Figure 2: Changes in lipid measures over time



Baseline represents measurements of participants at initiation of tesamorelin therapy (first agent). Addition of second agent represents measurements following tesamorelin therapy, at initiation of second agent. Follow-up represents measurements at least 6 months following combination therapy. All values are represented as means. Anthropometric measures (N=7). Lipid measures (N=6).

Conclusions

- These data show a high effectiveness for the combination of tesamorelin and GLP-1-RAs in a real-world setting, with most participants showing reductions in weight, BMI and waist circumference after 6 months of combination therapy.
- They also serve to highlight some of the complexities in treating PWH who have concerns for their weight, health, body composition and general appearance.
- Treatment practice includes multiple considerations, especially in discerning EVAF from generalized obesity for the selection of agents and helping patients reach both their metabolic and body composition goals.

Author Contact: **ccaldji@theratech.com**

[1]Godfrey C et al, J Inf Dis. 2019; [2]Sax P et al, CID. 2020; [3]Gharakhanian S, AIDS. 2022; [4] EGRIFTA SV® prescribing information. Theratechnologies Inc; 2024.