Dr. Virginia Cafaro received her medical degree from the Medical College of Virginia in Richmond, Virginia. She completed her residency in internal medicine at Jacobi Medical Center/Albert Einstein College of Medicine in New York and her infectious disease fellowship at Mt. Zion Medical Center in San Francisco. Dr. Cafaro is a Brown and Toland–designated HIV specialist. She is also Vice President of a nonprofit research group, Shared Perspectives On Therapy (SPOT). She has been in private practice since 1992.

Clinical Conversations in HIV-Associated Wasting

A brief discussion with Virginia Cafaro, MD

INDICATIONS AND USAGE

Serostim® (somatropin) for injection is indicated for the treatment of HIV patients with wasting or cachexia to increase lean body mass and body weight, and improve physical endurance. Concomitant antiretroviral therapy is necessary.

IMPORTANT RISK INFORMATION

CONTRAINDICATIONS

Serostim® should not be used in patients with acute critical illness, active malignancy, hypersensitivity to somatropin or any of its excipients, or diabetic retinopathy. Increased mortality has been reported in patients with acute critical illness due to complications following surgery, multiple accidental trauma, or acute respiratory failure. Preexisting malignancies should be inactive and treatment completed prior to instituting therapy. Serostim® should be discontinued if there is evidence of tumor recurrence. Systemic hypersensitivity reactions have been reported with postmarketing use of somatropin products.

Please see additional Important Risk Information throughout and enclosed Full Prescribing Information.

Serostim®
(somatropin) for injection

A brief discussion with Virginia Cafaro, MD

Q: Can you tell us about your experience treating HIV and HIV-associated wasting?

A: I've been working in HIV care for more than 25 years. I trained in the Bronx treating mostly intravenous drug users. I then moved to San Francisco and began seeing a mostly gay male population. At this time AZT was the only treatment. Life expectancy was short and wasting was a huge part of the disease.

But in 1996 the triple-drug combo hit with amazing results, and we got a better handle on how to keep the virus under control. We had been obsessed with T cells and viral load for years. We thought our work was done when the viral load fell below the level of detection.

Patients who were healthier, either physically or with higher CD4 cell counts when starting therapy, seemed to have a more robust response to treatment. It's in these patients where it was noticed that, while they didn't have the dramatic weight loss seen earlier in the epidemic, they did have weight loss. More importantly, they seemed to lack stamina, despite being on adequate antiretroviral therapy. Today, this is how HIV-associated wasting can present. It is subtle, and it appears more gradually, but it is just as serious.

Q: How does HIV-associated wasting look today?

A: A patient can look great on paper, but continue to lose weight. In my experience, we definitely see people who lose weight that they can't gain back. They start to tire out like the hero in the children's book *The Little Engine That Could*. They can't make it over the hill and begin sliding back down. They have a hard time getting through the day and have to nap or they fizzle out.

In these cases, if the patient demonstrates all of the appropriate markers for them to qualify for Serostim® (somatropin) for injection, prescribing it can make a meaningful difference. I've definitely treated a few people where this has been the case.

Q: What is your approach to diagnosing HIV-associated wasting?

A: I'll start my visits with a general conversation around how and what patients have been doing. I ask patients to track themselves and look backwards. I've started to proactively tell patients that they are their own best benchmark. If they see that over time—say over the course of several months or a year—they can't seem to do what they used to without an obvious explanation, it's something they should tell me.

I'll ask, "Are you in the same place you were 6 months to a year ago? And if not, what's changed? What's the reason for it?" They are truly their own best advocates, so it does start with a conversation. Just checking in about overall well-being is important.

If something is wrong, typically I'll start hearing patients talk more about being tired and doing less—maybe not having the energy to exercise as often. That's when I start digging deeper into questions regarding their weight, physical endurance, and energy level.

Q: Are there specific questions you ask your patients around wasting each visit?

A: I always talk to patients about eating healthy each visit. We talk about maintaining their weight and mostly maintaining their fitness. People have to be able to stay awake through the day, to be able to run and go up a flight of stairs without a problem. So questions around endurance and weight are important parts of the conversations.

Q: Are there any challenges to having these types of conversations?

A: It can be challenging to incorporate these conversations into visits when there is a time constraint, but that's why we still schedule people for 30-minute visits. It gives us time to actually sit and talk to patients about what is going on. It's not the 7-to 10-minute rushed visit. That extra time is really helpful in hearing their questions and concerns.

Q: Can you give us an example of how your general conversations with a patient led to a diagnosis of HIV-associated wasting?

A: One gentleman I treat is an interior designer who travels often. He started complaining that he was tired all of the time and had less endurance than he used to have. I noticed that he also lost weight, but his primary concern was his lack of stamina, which was really awful. We decided to do testing to find out what could be going on, or to rule out other causes. We found that his testosterone was low and prescribed testosterone replacement therapy, but we didn't see the desired effect. After ruling everything else out, we recently decided it would be best to start him on Serostim®.

He's only been on the Serostim® a short time and is already noticing an increase in his weight and endurance—enough for us to be confident this was the treatment he needed.

Q: What did you learn from your experience treating this patient?

A: I've learned a lot from treating this patient. On paper, as far as lab results go, he looks phenomenal. But then there was this extreme loss of energy with an unintentional weight loss. It's easy to assume maybe he's just getting old or overworked, but that wasn't the case at all.

He woke me up about being more proactive about having conversations with patients...about marking where they are and how they're doing and how they were doing a year ago. Sometimes it takes a big gap for you to be able to see a difference.

Proactively speaking to patients—asking questions about their energy and weight—is a best practice for me moving forward. We can't just do a blood test and say, "OK, here's your number. We've got to get this number to goal and you'll be fine." We need to consider how the patient is feeling and any concerns they mention during their visit.

Patient Case

Clinician's observation: "We can't just do a test and say, 'OK, here's your number.' We need to consider how the patient is feeling and address their concerns."

PATIENT PROFILE

56-year-old male who has been HIV+ since 1993. Patient experienced progressive weight loss over the course of 7 years with accompanying symptoms and decreased testosterone levels. Patient was prescribed testosterone replacement therapy. At subsequent visits throughout 2016, patient continued to present with further weight loss. At that time, he was started on Serostim® (somatropin) for injection for treatment of HIV-associated wasting.

RELEVANT MEDICAL HISTORY

- HIV+ (1993)

SOCIAL HISTORY

- Occupation: Interior designer; travels often for work
- Relationship status: Stable relationship
- Activity level: Used to work out regularly

OVERVIEW OF SYMPTOMS AT TIME OF HIV-ASSOCIATED DIAGNOSIS

- Unintentional weight loss
- Loss of muscle mass
- Decreased energy
- Extreme fatigue

WEIGHT HISTORY

- Height: 6'0"
- Premorbid weight: 185-190 lb
- Premorbid BMI: 25.1-25.8
- Weight at HIV-associated wasting diagnosis: 166 lb
- BMI at HIV-associated wasting diagnosis: 22.5

PHYSICAL EXAMINATION

- Loss of subcutaneous fat in extremities
- Decreased weight and BMI

LABORATORY RESULTS

- TSH: Within normal limits
- Testosterone levels: Below normal limits
- Cardiac evaluation: No noted abnormalities
- Cancer screening: Negative

TREATMENT HISTORY

- Testosterone replacement therapy

This case study represents a real patient of Dr. Cafaro, however, it may not be a complete representation of the individual's entire medical case or include his full experience with Serostim®. Certain details such as concomitant medications, dose adjustments, and adverse reactions may not be reflected. For more information obtained from clinical trials and unsolicited post-marketing reporting of adverse experiences, refer to the Important Risk Information throughout and see enclosed Full Prescribing Information.

IMPORTANT RISK INFORMATION (CONTINUED)

WARNINGS AND PRECAUTIONS

Acute Critical Illness: Increased mortality in patients with acute critical illness due to complications following open heart surgery, abdominal surgery or multiple accidental trauma, or those with acute respiratory failure has been reported after treatment with [pharmacologic amounts of] somatropin.

Concomitant Antiretroviral Therapy: Somatropin has been shown to potentiate HIV replication in vitro, however there was no increase in virus production when antiretroviral agents were added to the culture medium. All patients received antiretroviral therapy for the duration of treatment during Serostim® clinical trials and no significant increase in viral burden was observed.

Neoplasms: Patients with preexisting tumors should be monitored for progression or reoccurrence. Monitor patients on somatropin therapy carefully for preexisting nevi.

Please see additional Important Risk Information continued on the back and enclosed Full Prescribing Information.

Speak with your HIV-positive patients about decreased physical endurance resulting from unintentional weight loss and loss of lean body mass

YOU CAN INITIATE THE CONVERSATION BY ASKING QUESTIONS SUCH AS:

Do you have a loss of physical endurance associated with unintentional weight loss?

- Are any activities more difficult to perform?
- Are you exercising less?
- Do you need to rest more often?
- Do you frequently feel tired after certain activities?

Have you had unintentional weight loss?

- Have you recently lost weight without trying?
- Do any changes in your weight negatively affect your health and how you feel?
- Do your clothes fit more loosely than normal due to unintentional weight loss?
- Have friends, family, or coworkers noticed any changes in the way that you look based on changes in your weight?

In addition to speaking with your patients, you can measure their weight, calculate their BMI, and review their weight history to help you screen for HIV-associated wasting.

IMPORTANT RISK INFORMATION (CONTINUED)

WARNINGS AND PRECAUTIONS

Impaired Glucose Tolerance/Diabetes: Cases of new onset impaired glucose tolerance, new onset type 2 diabetes, and exacerbation of preexisting diabetes have been reported in patients receiving Serostim® (somatropin) for injection. Some patients developed diabetic ketoacidosis and diabetic coma. Patients with risk factors for hyperglycemia and glucose intolerance should be monitored closely and those using antidiabetic agents may require dose adjustment.

Intracranial Hypertension: Intracranial hypertension (IH) with papilledema, visual changes, headache, nausea, and/or vomiting has been reported. Funduscopic examination should be performed prior to initiating treatment with Serostim® and periodically during the course of treatment. If papilledema is observed, treatment should be stopped and restarted at a lower dose after IH-associated symptoms have resolved.

Severe Hypersensitivity: Serious systemic hypersensitivity reactions including anaphylactic reactions and angioedema have been reported with postmarketing use of somatropin products. Patients and caregivers should be informed that such reactions are possible and that prompt medical attention should be sought if an allergic reaction occurs.

Fluid Retention/Carpal Tunnel Syndrome: Swelling (particularly in the hands and feet), musculoskeletal discomfort, or carpal tunnel syndrome may occur during treatment with Serostim®. Symptoms may resolve spontaneously, with analgesic therapy, or after reducing the frequency of dosing. If symptoms of carpal tunnel do not resolve by decreasing the weekly number of doses, it is recommended that Serostim® treatment be discontinued.

Skin Atrophy: Rotate the injection site to avoid tissue atrophy.

Pancreatitis: Cases of pancreatitis have been reported rarely. Consider pancreatitis in patients who develop persistent severe abdominal pain.

ADVERSE REACTIONS

In clinical trials in HIV-associated wasting or cachexia the most common adverse reactions (incidence >10%) were increased tissue turgor, arthralgia, myalgia, and arthrosis, which may be responsive to dose reduction. Other common adverse reactions (incidence >5%) included nausea, fatigue, gynecomastia, paresthesia, generalized edema and hypoesthesia.

SPECIAL POPULATIONS:

Somatropin should be used during pregnancy only if clearly needed and with caution in nursing mothers because it is not known whether somatropin is excreted in human milk. The safety and effectiveness of somatropin in patients with hepatic or renal impairment or in patients aged 65 years and over have not been evaluated in clinical studies.

Please see the enclosed Prescribing Information for full disclosure.

EMD Serono

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