

Restoring Quality of Life: Managing Side Effects/Pain Control

Side Effects from Androgen Deprivation

Tia Higano, MD

I. Introduction

When I am talking about androgen deprivation, I am talking about treatments that make the testosterone level go way down.

II. Side Effects

In terms of side effects, the big three are what we normally are taught in medical school to think about—hot flashes, loss of libido and erectile dysfunction.

1. Body

Patients will see changes in their body, which may include weight gain, loss of muscle mass, a decrease in the size of their penis or testicles, a change in their hair pattern, and gynecomastia, enlargement of the breast tissue. Some of the things patients won't see or feel may include loss of bone mineral density, anemia, and worsening of underlying conditions that patients may already have or may be caused by androgen deprivation. Patients will often feel fatigue, lack of energy or initiative, emotional ups and downs, cognitive changes, and generalized aches and pains.

2. Loss of Libido and Erectile Dysfunction

One of the things that we find is very important when we are trying to address the loss of libido or erectile dysfunction is to know what the sexual function in the couple's relationship was like before the cancer diagnosis and treatment. If you go back and look at that, many men were already having problems with erectile dysfunction before the diagnosis of cancer. Sexual function, as well, can be an area where couples were struggling before the cancer diagnosis.

The loss of libido with hormonal therapy, unfortunately, is not something that physicians can do much about, and in terms of erectile dysfunction even in the patients who had good erectile function after surgery or radiation, hormonal therapy wipes it out because there is no desire. If the desire is still there, but there are problems with erectile functioning, there are many options for treatment, and patients should speak with their urologist about it.

III. Responses

Hot flashes, loss of bone density, depression, high blood pressure and increased lipids can all be treated with drugs, but if you look at decreased muscle mass, weight gain, change in cognitive function, fatigue and loss of initiative, there are really not good drugs generally for any of those. What can we do

for them? Exercise impacts every single one, and there are lots of reasons to do aerobic, resistance, and stretching exercises. Patients should start out slowly and try to implement the exercise with help and support.

In terms of the gynecomastia, it is irreversible so we practice prevention, and before we start hormonal therapy on our patients, we give them surface or electron beam radiation to the breast tissue, which has been shown in studies to minimize breast enlargement. If patients do get significant breast enlargement, they can go to a subcutaneous mastectomy. Occasionally, liposuction will work, but there are parts of the breast tissue that liposuction won't deal with.

IV. Penile/Testicles Changes

Surgery can frequently impact the length of the penis and frequently causes penile shortening due to retraction and scarring of the tissue. There has been a lot of effort in the last five years to pursue penile rehabilitation, and in the post-operative setting these techniques have made a difference in preventing penile shortening. We think that we could apply these same techniques to men who are going to undergo androgen deprivation for any length of time and perhaps prevent these things from happening with ADT. Shrinkage of the testicles is a normal physiologic response to the therapy, and it is important for patients to know that it can happen. It's variable, but there is also nothing that can be done to prevent it.

V. Intermittent Hormone Therapy

Intermittent Hormone therapy is when the testosterone is lowered for a variable amount of time, and the shots are then stopped, which allows the testicles to make testosterone again over time, usually between three and six months. With this approach, many of the side effects of androgen deprivation do recede. The two problems, however, that don't reverse easily are the weight gain and the breast enlargement.

VI. Take-Home Messages

If you're going to start on hormonal therapy, make sure you understand from your doctor why that step is being taken and what to expect. Be proactive. Don't wait until you have the side effects. If it is not offered, ask if you can meet with a nutritionist to see what you can do about preventing weight gain. Meet with a physical therapist or personal trainer early, especially if you're not used to exercising, and make sure your doctor gets the appropriate baseline tests so they can compare over time what the hormonal therapy has done. Finally, patients have to exercise.