CLINICAL VIGNETTE

Transgender Care

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A 23-year-old male to female transgender patient presented to endocrinology for hormone therapy. She started therapy in 3/2014 at an outside clinic on oral estradiol 4 mg daily and spironolactone 50 mg daily for testosterone suppression. Her dose of spironolactone was titrated up to 200 mg daily in order to further reduce testosterone levels. Unfortunately, the patient developed atypical symptoms on the higher dose including mood swings, suicidal thoughts, and constipation. The spironolactone dose was dropped back to 50 mg daily, and the patient decided to transfer her care to UCLA.

After being on spironolactone 50 mg daily for 2 weeks, she continued to have persistent symptoms, which affected her ability to function at work. She has no other significant past medical history or family history. Physical examination was remarkable for bilateral breast development, soft skin, and a female fat distribution. Laboratory tests included estradiol of 116 pg/ml and testosterone of 50 ng/dl.

The patient was desperate to switch therapy. After extensive discussion, she was started on the GNRH agonist gosarelin 3.6 mg monthly. Several days after the initial injection, she experienced symptoms of increased aggression, bone and muscle pain, and fatigue but felt much more functional compared to being on spironolactone. Unfortunately, approximately 2 weeks later, she developed extreme exhaustion, inability to concentrate, and dizziness. Repeat testosterone level increased to 510 ng/ml.

Given the sharp increase in her testosterone levels, we discussed other treatment options. The patient was reluctant to try finasteride due to possible side effects. She agreed to switch her antiandrogen therapy to the GNRH antagonist degarelix 80 mg monthly. On this therapy, her overall symptoms improved, and testosterone levels suppressed to 10 ng/dl.

Discussion

Transgender is a diagnosis to describe those whose gender identity and biologic gender are incongruent. These patients usually seek hormonal and/or surgical therapy in order to make their bodies consistent with their self-image.[1] As the media has increased visibility of transgender members of the community, more are seeking therapy.

Male to female (MTF) therapy involves use of an estrogen and an antiandrogen. Options for estrogen therapy include oral, transdermal, or injectable estradiol. Antiandrogen therapy options include spironolactone (usually the treatment of choice), finasteride, and GNRH agonists. While on therapy, basic metabolic panel, fasting lipids, hemoglobin A1c, liver function tests, and prolactin levels should be monitored.[2] Our patient had difficulty tolerating antiandrogen therapy. She started with spironolactone, which inhibits androgen binding to its receptor as well as decreasing testosterone production. This is first line therapy due to its generally favorable side effect profile and low cost.[3] However, our patient was unable to tolerate this, and we switched to gosarelin, which is a GNRH agonist that reduces production of gonadotropins (LH and FSH) thereby reducing testosterone production.

Unfortunately, our patient developed a testosterone surge that can occur with GNRH agonist therapy due to an intial increase in LH and FSH levels. Due to her discomfort with this effect, we started her on degarelix, a GNRH antagonist with no associated gonadotropin surge. She was able to tolerate degarelix and achieve goal testosterone levels. Unfortunately, there is no insurance coverage for the medication, and it was quite costly for the patient. She is planning to undergo removal of her penis and testicles followed by construction of a vagina at which time she can discontinue therapy.

REFERENCES

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