Integrated Care of an Aging HIV-Infected Male-to-Female Transgender Patient

Pansy Ferron, NP, PAC, MPH, PhDc
Sandra Young, ARNP, MSN, FNP-BC
Catherine Boulanger, MD
Allan Rodriguez, MD
Jose Moreno, MD

Key words: *aging, complex medical disorders, HIV, health care quality, health disparities, male-to-female transgender, sex reassignment surgery*

Case Study

L.Z. is a 68-year-old Hispanic transgender woman who was followed in the authors' adult outpatient HIV clinic between 1998 and 2007. L.Z. received both primary care and HIV specialty care in the authors' clinic and was started on antiretroviral therapy (ART) the year of her initial visit. She was also followed up by a psychiatrist for depression, a cardiologist for coronary artery disease, an endocrinologist for diabetes, and a urologist for urethral stricture. She was scheduled for vaginal repair because her constructed vagina was apparently closing.

Her medications included saquinavir mesylate, 500 mg, two tablets twice daily; ritonavir, 100 mg, one tablet twice daily; didanosine, 400 mg, one tablet once daily; zidovudine, 300 mg, twice daily; rosuvastatin calcium, 10 mg, once daily; hydrochlorothiazide, 12.5 mg, once daily; benazepril hydrochloride, 5 mg, once daily; atenolol, 50 mg, once daily; aspirin, 81 mg, once daily; bupropion hydrochloride, 100 mg, once daily; sertraline hydrochloride, 100 mg, once daily; metformin, 500 mg, twice daily; glipizide ER, 10 mg, once daily; insulin glargine, rDNA origin insulin, 40 units, subcutaneous at bedtime; and insulin lispro, rDNA origin insulin, 25 units in the morning and 15 units in the evening with meals. L.Z. was last seen in the authors' facility in 2007. At that time, her CD4 + T cell count was 1,031 cells/mm^3, and her viral load (HIV-RNA) was undetectable. Other laboratory data included hemoglobin A1C = 7.4% (4.7-6.4), cholesterol = 193 mg/dl (150-200), low-density lipoprotein = 121 mg/dl (65-160), and triglyceride = 136 mg/dl (40-160).

Medical History

L.Z. underwent sexual reassignment surgery (SRS) 11 years before her first clinic visit and was diagnosed as having HIV infection in 1997 at the age of 57 years. In 1998, she was started on combination ART. At that

Pansy Ferron, NP, PAC, MPH, PhDc, is physician assistant, Division of Infectious Diseases, Miller School of Medicine, University of Miami, Miami, Florida. Sandra Young, ARNP, MSN, FNP-BC, is a nurse practitioner, Division of Infectious Diseases, Miller School of Medicine, University of Miami, Miami. Catherine Boulanger, MD, is assistant professor, Division of Infectious Diseases, Miller School of Medicine, University of Miami, Miami. Allan Rodriguez, MD, is associate professor, Division of Infectious Diseases, Miller School of Medicine, University of Miami, Miami. Jose Moreno, MD, is a professor, retired, Division of Infectious Diseases, Miller School of Medicine, University of Miami, Miami, and currently in private practice in Miami.

JOURNAL OF THE ASSOCIATION OF NURSES IN AIDS CARE, Vol. 21, No. 3, May/June 2010, 278-282
doi:10.1016/j.jana.2009.12.004
Published by Elsevier Inc. on behalf of Association of Nurses in AIDS Care

time she also began lipid therapy for elevated triglycerides. In 2000, she began treatment for diabetes mellitus, elevated cholesterol, and hypertension. In 2001, she reported difficulty with penile vaginal insertion; she was also treated for herpes genitalia and microscopic pyuria. In 2002, she was referred to psychiatry for evaluation of depression. The patient was being followed up by the gynecology clinic for vaginal stricture as well as by urology for recurrent pyuria and difficulty in urination. In 2005, a cystoscopy was performed for complaints of difficulty urinating, and L.Z. was found to have a stricture of the urethral meatus at the constructed vagina. In 2006, while vacationing in another country, L.Z. reported having a myocardial infarction. On her return, she was seen by a cardiologist who performed a cardiac catheterization with stent placement.

In 2007, L.Z. was admitted to another facility with paroxysmal atrial tachycardia because of drug-drug interaction between digoxin, atenolol, and metoprolol. The patient was followed up by a cardiologist to whom she did not disclose her HIV status; the cardiologist placed her on rosuvastatin calcium while she was also taking pravastatin sodium. Additionally, she was followed up by an endocrinologist at the same facility who was unaware of her HIV status or the medications prescribed for her by the HIV specialist.

The Aging HIV-Infected Male-to-Female Transgender Patient

Older age is associated with the onset of several chronic conditions, including cardiovascular diseases, diabetes mellitus, and depression (Gebo, 2004). Aging patients have long-term complications of HIV infection in addition to chronic medical conditions independent of HIV. Adverse effects are magnified as a result of the combination of medications prescribed for HIV infection and multiple medications used to treat other chronic diseases (Dakin, O'Connor, & Patsdaughter, 2006; Meadows, 2003). Polypharmacy also contributes significantly to medication errors, drug-drug interactions, drug-disease interactions, and herb-drug interactions and toxicities (Zdanowicz, 2006).

In addition to complications from chronic diseases, the aging HIV-infected male-to-female (MTF) transgender patient has the added burden of complications from hormones, SRS, stigma, and disparities in health care independent of ethnicity (Keatley & Bockting, 2008). Stigma may prevent disclosure of HIV status to other providers, which contributes to drug-drug interactions as well as other serious primary care and medical management problems.

Compared with younger HIV-infected adults, higher levels of psychological problems have been reported in HIV-infected older adults. These symptoms are associated with high life-stressor burden, low level of support from family and friends, and reduced access to health and social services (Heckman et al., 2002). Additionally, older transgender persons often remain in abusive relationships (Witten & Eyler, 2006). Psychosocial issues such as perceived or actual lack of social support, abuse, and discrimination are intensified in aging HIV-infected transgender individuals, resulting in a vicious cycle of mental health problems including substance abuse, depression, anxiety, and suicidal ideation, along with suicide attempts (Centers for Disease Control and Prevention [CDC], n.d.; Witten & Eyler, 2006).

Epidemiology of HIV

Among persons living with HIV infection, 770,000 (70%) are between 25 and 49 years of age, whereas 280,000 (25%) are 50 years of age or older (CDC, 2008). The HIV prevalence estimates from MTF-focused studies have ranged from 11% to 78% (San Francisco AIDS Foundation, 2009). One study reported that the rate of HIV in African American transgender women was 56.3% (Keatley & Bockting, 2008). However, the prevalence of HIV infection in transgender persons over 50 years of age remains unknown (CDC, 2007).

Public Health Effect of Chronic Diseases

Federal spending on HIV care in 2004 was $11.6 billion; in comparison, the total cost of cardiovascular disease, the first-ranking cause of death in the United States in 2006, was $403 billion. Cardiovascular disease causes more deaths among all racial and ethnic groups than any other disease. Diabetes mellitus has a total cost of $132 billion and was the