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Women and HIV: An expanded perspective

In this issue of the *Cleveland Clinic Journal of Medicine*, Drs. Short and Anderson give an overview of the epidemic of human immunodeficiency virus (HIV) infection in US women and the various aspects of health care of this group, including pregnancy.[1] They introduce a much broader topic and bring to light a number of additional concerns.

HIV PREYS ON THE VULNERABLE

The authors review epidemiologic trends and the evolving demographics of HIV, which deserve specific discussion.

See related article, page 691

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In the early years of the epidemic, ie, the early 1980s, HIV infection in women was overshadowed by the epidemic in men, particularly men who have sex with men. The epidemic in men who have sex with men remains the larger component of the HIV picture in the United States. But worldwide, HIV is an evenly balanced problem, with nearly half of all infections occurring in women.[2] Women have received much more attention recently.

In the United States, about 300,000 women are living with HIV, and 10% of them are unaware of it. Between 1985 and 2013, the number of HIV cases in US women tripled.

The epidemic continues to disproportionately affect women of color. Two-thirds of all women with HIV are African American,[2] and estimates suggest that 1 of every 32 African American women will acquire HIV during her lifetime. On a positive note, there was a 20% reduction in new infections among African American women between 2008 and 2010.[3]

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The epidemic preys on the vulnerable and is fueled by poverty, lack of education (general and health literacy), substance abuse, and restricted access to health care. Major metropolitan areas such as New York, Washington, DC, Miami, and Los Angeles are "hot spots," where high concentrations of infected people reside.[4]

Many women underestimate or do not perceive their susceptibility. They unknowingly acquire HIV infection from their male partners, many of whom are unaware of their infection. Some of their partners may lead a dual life of bisexuality. In some areas, an estimated 20% of men who have sex with men also engage in sex with women.[5] If these women contract the disease, they may be diagnosed at a late stage and when they are symptomatic, or coincidentally during pregnancy and childbirth.

Negotiating safe sex practices can be difficult for a woman. She may perceive or lack empowerment to do so, fearing rejection, isolation, or violence. Sexual violence may have been initiated in childhood, through intimate partners, rape, sex trafficking, or prostitution. Patterns vary throughout the world, but sexual violence is more common than perceived.[6] Because of shame, embarrassment, and isolation, many victims do not seek medical care and so may carry undiagnosed infections. Even when they access care, they are less likely to remain in the HIV care system.[7] Greater efforts are needed to reach these women, make them feel supported in care, and keep them in the system.

TESTING IS CRUCIAL

Diagnosis remains a weak link in the chain of care for both men and women. Success has been noted in the form of a marked reduc-

tion in cases of mother-to-child transmission, thanks to near-universal opt-out screening during pregnancy or at delivery.

If appropriate routine testing were done for all people, as advocated by the US Centers for Disease Control and Prevention guidelines,[8] more cases could be diagnosed, behaviors changed, and treatment offered. Control of HIV through treatment can lead to a 96% reduction in transmission between serodiscordant partners, as demonstrated in HPTN 052, an ongoing phase 3 trial.[9] Early diagnosis and treatment offer the potential for improved immune regeneration and healthier lives.

PRE-EXPOSURE PROPHYLAXIS

Pre-exposure prophylaxis (PrEP) is one approach to empowering women and preventing HIV infection. Studies have demonstrated the efficacy of this approach, although some studies have not.[10,11]

An important finding in the failed studies appeared to be a lack of adherence to the regimen.[11] Unless taken faithfully, PrEP will not succeed. Additionally, there may be inherent differences in outcomes for unknown reasons. Lack of access to the necessary two-drug combination regimen is another barrier.

PrEP is expensive, requires regular monitoring, and requires patients to remain engaged in medical care. Currently, not all medical programs offer PrEP, and not all insurance policies cover it. Further insight into long-term side effects and complications is needed.

Although PrEP is an attractive concept and a reality for some, it is an incomplete solution to prevention at this time.

MEN AND WOMEN ARE DIFFERENT

Men and women are different physiologically and psychologically. Women typically have a lower body mass, lower bone mass, and higher content of body fat. As a result, women may differ from men in their ability to tolerate medications, and long-term side effects may be more pronounced.

Women are also more likely to place family responsibilities above self-preservation and personal health concerns. As a result, providing for and taking care of their children takes precedence over care of their own health.

Providing care to women presents many challenges and opportunities to improve their health. Health care access, transportation, assistance with child care during medical visits, the availability of counseling to deal with shame, guilt, and depression, and maintaining women within the care system are but a few examples.

AGING WITH HIV: STUDY NEEDED

Antiretroviral therapy has enabled patients to survive and often to reach a normal life expectancy if the infection is diagnosed and treated early. As a result, HIV-associated causes of death have been replaced by non-HIV comorbidities typical of aging, such as cardiovascular disease, organ failure (heart, lung, kidney, liver), non-HIV cancers, and bone disease.

Women face unique aspects of aging with menopause, including an accelerated rate of bone loss resulting in osteoporosis. HIV itself and some antiretroviral drugs may increase the loss of bone mineral density. Alcohol abuse, sedentary lifestyle, smoking, hepatitis C coinfection, and poor nutrition also contribute to this problem. Bone disease and many other aspects of aging and HIV in women require more research and intervention.

Other areas that need to be studied are the unique mucosal immune system of the female genital tract, the interplay of sex hormones and the immune system, the role of genital tract inflammation in increasing the risk of HIV acquisition, sexual violence and HIV acquisition, and the safety and efficacy of PrEP for women. This will require prioritization and ongoing funding, which is becoming scarcer. If there is to be hope of containing this disease, our efforts to understand it must not diminish. ■

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