

## Perspective

# Sexually Transmitted Diseases in the HIV Care Setting: What's Really Going on Down There?

*Syphilis epidemics are occurring in a number of cities in the United States and worldwide. In New York City, the number of cases of primary or secondary syphilis has increased from 130 in 1999 to 434 in 2002. The majority of new cases occur in men, with most of these occurring in men who have sex with men. The presentations of primary and secondary syphilis are varied and can be overlooked or confused with other diseases. Health care providers should be aware of atypical presentations of sexually transmitted diseases (STDs), screen for nonapparent STDs, and know how to treat such diseases once they are identified. Client-centered counseling may be successful in reducing risky behaviors and the transmission of STDs. This article summarizes a presentation given by Jeanne Marrazzo, MD, MPH, at the October 2003 International AIDS Society–USA course in New York.*

### Case History

A 35-year-old man with a persistent genital lesion (3 weeks) and associated rash (1 week) was initially treated for *Candida* (yeast) balanitis with topical antifungal cream at the clinic where his girlfriend receives routine care. He later presented to the STD clinic; while the original lesion was nearly resolved, a new rash appeared on his scrotum. Examination showed small erythematous, palpable, papular lesions scattered on the surface of the scrotum, a slightly pink area on the glans, and a rash consistent with tinea cruris (Figure 1, top). In a detailed interview, the man reported that he had had receptive/insertive anal intercourse with 2 men within the past 3 months, a fact that had not been related to his prior health care provider. He also stated that he “almost always” used condoms with men but never used condoms with his girlfriend. Results of immediate work-up of the scrotal lesions found that darkfield microscopy to detect *Treponema pallidum* was negative. During the patient’s prior examination, his perianal area had not been checked. Both the perianal area and the oral cavity should be examined whenever a patient presents with a genital lesion. Examination of the perianal area

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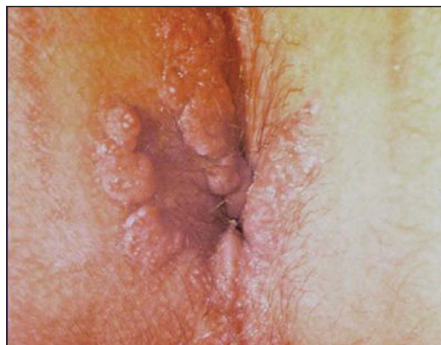


Figure 1. Case presentation. Top: Small erythematous papules on scrotum. Pinkish area at glans is not clearly discernible. Bottom: Fleshy papules in perianal area. Photographs are courtesy of the Seattle STD/HIV Prevention Training Center.

showed numerous fleshy papules resembling flat-topped warts (Figure 1, bottom). The rapid plasmin reagin (RPR) test was positive, indicating the presence of syphilis. The serum Venereal Disease Research Laboratory (VDRL) test was positive with a titer of 1:128.

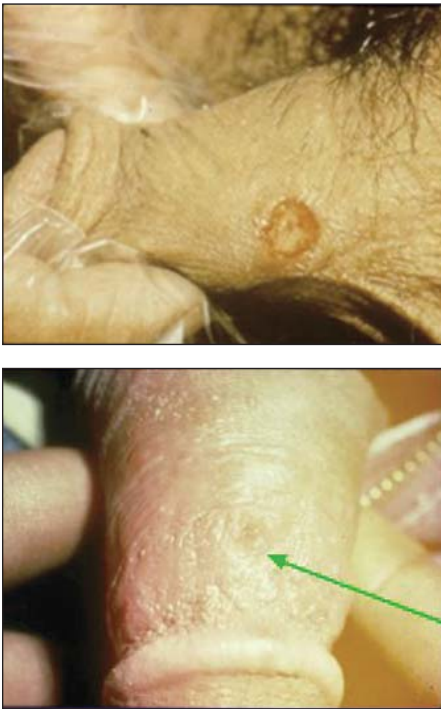
HIV enzyme-linked immunosorbent assay (ELISA) was reactive and was confirmed with Western blot testing. Routine tests for chlamydia and gonorrhea at the urethra, rectum, and pharynx were negative.

The lesions in the perianal and scrotal areas of this patient are condyloma lata, characteristic of secondary syphilis; these lesions are foci of exuberant treponemal multiplication and are extremely contagious. It is not uncommon for these lesions to be mistaken for perianal warts and to find that treatment with liquid nitrogen has been administered due to mistaken diagnosis. The patient’s groin rash is tinea cruris. Thus, he actually exhibits signs of both primary and secondary syphilis, with the healing lesion on the tip glans of the penis being the initial chancre. Approximately 15% of patients with early syphilis exhibit overlapping signs of primary and secondary disease.

### Syphilis in New York City

Epidemics of syphilis are occurring in a number of cities in the United States. Data from the New York City Department of Health indicate that the number of new cases of primary or secondary syphilis—based on presentation with characteristic lesions, not serologic findings—increased from 130 in 1999 to 282 in 2001, and to 434 in 2002. Similar trends are being observed in Los Angeles, San Francisco, and Seattle, among other cities; overall, approximately 6500 new cases of early syphilis were reported in the United States in 2002. In the mid-1990s, syphilis essentially had been eradicated from several large cities on the West Coast. It is now estimated that there will have been 750 new cases of early syphilis in San Francisco in 2003, and 90 new cases are expected in Seattle (which had only 1 new case in 1995).

The majority of new cases in New York City are seen in men. Among



**Figure 2.** Primary syphilis in men may have a number of presentations, including the classic chancre (top) or a small noninflammatory lesion (bottom). Photographs are courtesy of the Seattle STD/HIV Prevention Training Center.

patients who were interviewed, the number of syphilis cases occurring in men who have sex with men increased dramatically from 2000 to 2002. Among men with known HIV status, the proportion of new syphilis cases occurring in HIV-infected men increased from 20% in 1999 to 61% in 2002.

There are likely a number of factors contributing to the resurgence of syphilis. In the HIV-infected community, increased survival and well-being resulting from effective antiretroviral therapy have been associated with a return to normal activities, including sexual activities. Many at-risk individuals erroneously believe that HIV disease is now “curable” and that HIV cannot be transmitted when plasma HIV RNA levels are controlled on potent antiretroviral therapy. There is also reduced visibility of end-stage AIDS, which, in the past, may have served as a deterrent to unsafe sexual practices. In addition, there appears to be a general “fatigue” or “burnout” with regard to practicing safer sex. Other factors contributing to

the rise in cases of syphilis may include increased use of recreational drugs (eg, methamphetamine [eg, crystal meth], nitrates [eg, poppers], and sildenafil citrate [Viagra]); the reemergence of old ways to meet anonymous partners (eg, baths, parks); and the emergence of new ways to meet partners (eg, Internet dating; in fact, in Seattle, a surprisingly high proportion of new patients with syphilis reported meeting their anonymous partners via the Internet).

### Presentation of Syphilis

In men, primary syphilis may present as the classic chancre on the penile shaft (Figure 2). Typically, the chancre is painless and nontender to palpation, is indurated with a heaped-up border, and has a clean (nonpurulent) base. The lesion is RPR- or VDRL-positive in approximately 70% of cases. However, primary disease does not always take the classic form; for example, the chancre may appear as a small, noninflammatory lesion (Figure 2). Only serologic evaluation or darkfield microscopy can provide a definitive diagnosis. Chancres can appear anywhere that inoculation has occurred via direct contact—eg, fingers, mouth, and perianal area. Chancres in the perianal area are sometimes mistaken for genital herpes.

Secondary syphilis can be protean in its manifestations, including presentation as a nephrotic syndrome, hepatitis, or febrile lymphadenitis. The classic presentation is a macular rash on the palm of the hand or sole of the foot (Figure 3, top); differential diagnosis of the rash includes Rocky Mountain spotted fever and drug reactions. The rash is highly contagious. As noted, condyloma lata (Figure 1) are also characteristic of the secondary stage, and are often confused with condyloma acuminata resulting from infection with human papilloma virus (HPV) types 6/11. Condyloma lata can occur at any moist body site. Their fleshy, flat-topped appearance may help to distinguish them from HPV-associated warts, which are less fleshy and more verrucous. Anal sex is not a prerequisite for perianal condyloma lata or HPV-associated warts. Secondary syphilis may also appear as mucous patches on the background of a “coated” tongue (Figure 3, bottom).

These lesions contain large numbers of treponemes and are also highly contagious. The patches can be confused with oral hairy leukoplakia. RPR testing and VDRL testing are positive in almost 100% of cases of secondary syphilis.

### Genital Herpes

Approximately 45 to 60 million individuals in the United States have genital herpes. The classic presentation of initial infection in men is that of vesicles on the penile shaft. However, the presentation can also occur in forms that are difficult to distinguish from the chancres of syphilis; thus, presentation may occur as eroded ulcers suggestive of syphilis or as a single ulcer with a clean base suggestive of syphilis. In women, presentation on the external genitalia often occurs as ulcers rather than as the classic vesicles. The specific diagnosis of genital herpes can be made by culture or direct antigen test, involving swabbing of a lesion. In some circumstances, herpes serology can also be a highly useful tool. Until about 3 or



**Figure 3.** Secondary syphilis. Top: Classic macular rash. Bottom: Mucous patches on “coated” tongue. Photographs are courtesy of the Seattle STD/HIV Prevention Training Center.

4 years ago, serum antibody tests that claimed to be specific for herpes simplex virus (HSV)-1 and -2 were not actually type specific, since they were not based on glycoprotein G. Glycoprotein G-based serology kits are shown in Table 1. Herpes serology can be used to confirm clinical diagnosis, especially when direct detection of virus is unlikely—that is, when lesions are negative for virus, when they cannot be sampled, or when they are healed or otherwise not present. Most genital herpes cases are subclinical, with about 90% of people infected with HSV-2 claiming never to have had an outbreak. Serology is thus useful for detecting cases of subclinical infection in individuals at high-risk—for example, those with a partner who has genital herpes or those with other symptoms suggestive of atypical or undiagnosed genital herpes.

### How to Prevent Sexually Transmitted Diseases

Crucial components in preventing transmission of STDs include prompt identification, effective treatment of infections, and appropriate risk counseling. Health care providers must be aware of epidemiologic trends so that nonapparent STDs or cases with atypical presentations can be identified. Assessment must include a thorough sexual history (STD-related risk assessment) in all patients. Every patient should also be screened for nonapparent STDs. Once risk behavior is identified, the adverse consequences of the behavior and the need to prevent it should be addressed. Providers must also know how to treat an infection (or whom to call for expert guidance) once an infection is identified.

A recent *Morbidity and Mortality Weekly Report* (February 2003) provides an excellent source for STD screening procedures in men. It is recommended that all male patients be asked, as part of a thorough and appropriate sexual history, whether they have sex with men; it is crucial to remember that reported sexual orientation does not always predict specific sexual behaviors. If sex with men is reported, it should be determined whether such activity has occurred within the past year. If so, and screening for STD has not been performed previously, providers should

**Table 1. Commercial Type-Specific Glycoprotein G-Based Serology Kits\***

|                         | Manufacturer | HSV Type     |
|-------------------------|--------------|--------------|
| <b>FDA Approved</b>     |              |              |
| HerpeSelect® ELISA      | Focus        | HSV-1, HSV-2 |
| HerpeSelect® Immunoblot | Focus        | HSV-1, HSV-2 |
| POCKit® HSV-2           | Diagnology   | HSV-2        |
| Off the market          |              |              |
| Premier™ ELISA          | Meridian     |              |
| Off the market          |              |              |
| <b>Not FDA Approved</b> |              |              |
| Cobas®-HSV-2            | Roche        | HSV-2        |
| QuickVue® HSV-2         | Quidel       | HSV-1, HSV-2 |

\*The Western blot assay, which is considered the gold standard, is not commercially available. HSV indicates herpes simplex virus; FDA, Food and Drug Administration; ELISA, enzyme-linked immunoabsorbent assay.

screen for STD as detailed below. The recommendations for screening apply to both self-reported HIV-seropositive and HIV-seronegative men, since patients may be unaware of HIV status. The recommendations also apply irrespective of reported condom use for anal sex, since reported condom use is not predictive of occurrence of a new STD. Appropriate STD screening should be performed at least annually and at 3-month intervals in individuals who remain at risk for STDs. A recent *Morbidity and Mortality Weekly Report, Recommendations and Reports* from July 2003 is an excellent compendium of recommendations for the management, prevention, and diagnosis of STDs in HIV-infected patients. These include laboratory screening strategies for asymptomatic STDs and available diagnostic tests for STDs to be used at the first visit and subsequent routine visits. Every patient should be tested for syphilis, gonorrhea, and chlamydia at the initial visit. Women should also have a Pap smear and undergo evaluation for vaginitis. Patients reporting receptive anal sex should be tested for rectal gonorrhea and chlamydia; patients reporting receptive oral sex should be tested for pharyngeal gonorrhea.

There is evidence that behavioral intervention can be successful in reducing the risk of STDs. Project Respect, performed among heterosexual individuals attending an STD clinic, showed

that client-centered counseling could reduce the incidence of STDs by 40%; however, there was a follow-up rate of only 66%, and the preventive effect appeared to wane after 12 months. Nevertheless, such findings suggest the potential efficacy of client-centered counseling.

Key features of such counseling include:

- Establishing client rapport and trust
- Maintaining a nonjudgmental attitude
- Using open-ended questions
- Maintaining client confidentiality
- Facilitating risk reduction on the client's terms (eg, basing efforts on realistic goals)
- Limiting information to essential facts that reduce misinformation
- Encouraging active participation of the client

Interactive tools and exercises in client-centered counseling can be found at [www.stdhivpreventiontraining.org](http://www.stdhivpreventiontraining.org).

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## Suggested Reading

Centers for Disease Control and Prevention. Incorporating HIV prevention into the medical care of persons living with HIV. Recommendations of CDC, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. *MMWR Recomm Rep*. 2003; 52(RR-12):1-24.

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