

HIV Module: STI Screening and HIV infection

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Module adapted from IAS-USA. Sexually Transmitted Infections in the HIV-infected patient.

Objectives:

- Define the incidence and prevalence of symptomatic and asymptomatic gonococcal and chlamydial infections by site of infection, with an emphasis on MSM HIV-infected patients
- Describe the approach to routine screening for STIs in HIV-infected patients including how often to screen and which tests are optimal for detection of STIs
- Determine management of STI infections in terms of treatment and treatment of sexual partners
- Understand that HIV-infected MSM are at risk for acquiring HCV through sexual exposure

Relevance:

- STIs are common among people infected with HIV.
- For individuals who are HIV negative, infection with an STI increases the risk of acquiring HIV infection.
- Early detection and treatment of STIs can prevent spread of infection and reduce the incidence of new HIV infections.
- Routine screening for STIs in the primary care setting remains low despite high prevalence of disease.
- Certain subpopulations of HIV infected individuals including MSM have demonstrated an increased incidence in STIs including syphilis, gonorrhea and chlamydia.
- Antibiotic resistance among gonococcal strains has made treatment challenging.

Although there is a high prevalence of STI coinfection among HIV-infected patients (described below) the routine screening for such infections in the outpatient setting remains low. Among HIV-infected MSM who visited 8 large STI clinics in 6 cities in the US between 2004 and 2006, annual screening for rectal chlamydia and gonorrhea infection was performed in only 2-9% and annual screening for urethral chlamydia and gonorrhea infections were 14-18%. This was compared with annual screening for syphilis at a rate of 66-76% of visits.

Case:

A 32-year-old man recently tested positive for HIV infection and he is visiting the clinic today. Laboratory tests show his CD4+ count is 390/ μ L and his HIV VL is 78,000 copies/mL. He discloses to you that he has hooked up with men who he met on Grindr, an online hookup app. In these hookups he was both the receptive and insertive oral and anal (versatile) sexual partner. He reports using condoms "most of the time" for anal sex, but rarely for oral sex. His rapid plasma reagin (RPR) test is nonreactive. Serologies for hepatitis A virus (HAV), HBV, HCV and *Toxoplasma gondii* are pending. His medical history includes recurrent outbreaks of genital herpes, which he treats with episodic valacyclovir. He has had some fatigue recently but otherwise feels well. The physical exam today was unremarkable.

Question 1. How often should this patient receive STI screening? What is the prevalence of asymptomatic gonococcal and chlamydial infections in the MSM community? Among HIV-infected persons?

Case (continued):

During the interview the patient reports 8 sexual partners in the past 3 months. Most of these partners he met through Grindr or Scruff on his iPhone or he met anonymous at a local adult bookstore. He also occasionally travels to NYC and goes to a bathhouse a few months a year. He has a few “regular” hookup buddies that he reports not using condoms with and he further discloses that while he attempts to use condoms with his anonymous encounters he is not always successful. His physical exam, including genitourinary, was normal.

Question 2. What tests should be ordered for this patient?

Case (continued):

You send off samples to evaluate for *C trachomatis* and *N gonorrhoeae* at the rectum and urethra and *N gonorrhoeae* at the pharynx using NAAT-based tests. Test results come back and reveal that patient has gonorrhea in his pharynx only. He has no known drug allergies and only occasionally takes Ibuprofen for headaches and a daily vitamin.

Question 3: What is the appropriate treatment regimen for his gonococcal infection?

Case (continued)

You treat the patient with 250mg IM ceftriaxone and 1g PO azithromycin. You provide the patient with risk reduction counseling including condom use and his use of Grindr to meet his sexual partners. You also instruct him to abstain from all sexual conduct for the following week. He makes an appointment for 3 month follow up for STI screening. He is worried that if his boyfriend finds out about his gonorrheal infection he we break up with him. He tells you that his boyfriend does not know about his extramarital affairs and that the couple has had serious conflict about this topic in the past.

Question 4: What do you do about partner notification?

Required Readings:

1. Rieg, G., et al., *Asymptomatic sexually transmitted infections in HIV-infected men who have sex with men: prevalence, incidence, predictors, and screening strategies*. *AIDS Patient Care STDS*, 2008. **22**(12): p. 947-54.
2. JL Marcus, KT Bernstein, RP Kohn, S Liska, SS Philip *Infections missed by urethral-only screening for chlamydia or gonorrhea detection among men who have sex with men*. *Sexually transmitted diseases*, 2011. 38; 10:922-28.

Selected Support References:

1. Kalichman, S.C., J. Pellowski, and C. Turner, *Prevalence of sexually transmitted co-infections in people living with HIV/AIDS: systematic review with implications for using HIV treatments for prevention*. *Sex Transm Infect*, 2011. **87**(3): p. 183-90.
2. Centers for Disease Control and Prevention. *Sexually Transmitted Diseases Treatment Guidelines*, 2015.
3. van der Helm, J.J., et al., *The hepatitis C epidemic among HIV-positive MSM: incidence estimates from 1990 to 2007*. *AIDS*, 2011. **25**(8): p. 1083-91.
4. Rauch, A., et al., *Unsafe sex and increased incidence of hepatitis C virus infection among HIV-infected men who have sex with men: the Swiss HIV Cohort Study*. *Clin Infect Dis*, 2005. **41**(3): p. 395-402.
5. Wandeler, G., et al., *Hepatitis C virus infections in the Swiss HIV Cohort Study: a rapidly evolving epidemic*. *Clin Infect Dis*, 2012. **55**(10): p. 1408-16.

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