



May 25, 2007

Adolescents and STDs

When the federal Centers for Disease Control and Prevention (CDC) announced in April 2007 that it is no longer recommending antibiotics known as fluoroquinolones for the treatment of gonorrhea in the United States, the change had implications for treatment of adolescents who are infected with one of the most common sexually transmitted diseases.

The announcement updated information provided in the CDC's 2006 issue of "Sexually Transmitted Diseases Treatment Guidelines," a periodic publication that makes recommendations for diagnosis and treatment of sexually transmitted diseases. The clinically detailed 150-page guidelines include descriptions of STDs frequently contracted by teenagers.

Adolescents require special attention, the guidelines note, because the rates of many sexually transmitted infections are highest among teenagers; reported rates of gonorrhea and chlamydia, for example, are highest among females aged 15 to 18 years. "Adolescents are at higher risk for STDs because they frequently have unprotected intercourse, are biologically more susceptible to infection, are engaged in sexual partnerships frequently of limited duration, and face multiple obstacles to using health care."

The guidelines also note that, with few exceptions, adolescents in the United States can legally consent to the confidential diagnosis and treatment of STDs. In all 50 states and the District of Columbia, medical care for STDs can be provided to adolescents without parental consent or knowledge. Despite the prevalence of STDs among adolescents, however, providers frequently fail to inquire about sexual behavior, assess risk for STDs, provide counseling on risk reduction, or screen for asymptomatic infection during clinical encounters. "Careful, nonjudgmental, and thorough counseling are particularly vital for adolescents who might not acknowledge that they engage in high-risk behaviors."

STDs in Adolescents

The following are summaries of the CDC's "Sexually Transmitted Diseases Treatment Guidelines 2006" that reference STDs in adolescents.

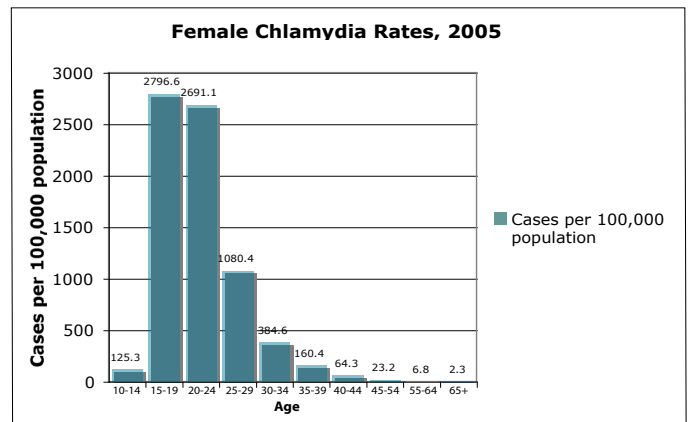
Gonorrhea

Neisseria gonorrhoeae is the second most commonly reported STD in the United States, with an estimated 600,000 new infections occurring each year. The majority of infections among men produce symptoms that cause them to seek curative treatment,

but among women, there may not be recognizable symptoms. Both symptomatic and asymptomatic cases can result in tubal scarring that can lead to infertility or ectopic pregnancy. Females under the age of 25 are at special risk for gonorrhea infection. Diagnosis of infection may be made by testing endocervical, vaginal, male urethral, or urine specimens. All patients tested for gonorrhea should also be tested for other STDs, including chlamydia, syphilis, and HIV. Fluoroquinolones (ciprofloxacin, ofloxacin, and levofloxacin) were recommended as first-line treatments for gonorrhea in 1993, but those drugs have become resistant, and treatment for gonorrhea is now limited to a single class of drugs known as cephalosporins, underscoring the need for research into new drugs.

Chlamydia

Chlamydial genital infection is the most frequently reported infectious disease in the United States and the prevalence is highest in persons under 25 years of age. The infection may be asymptomatic in both males and females; it can be transmitted to infants at birth. Annual screening for chlamydia is recommended for all sexually active women 25 years of age or younger, using urine or swab specimens collected from the endocervix or vagina. Infections in men can be diagnosed by urethral swab or urine specimen.



CDC. STD Surveillance 2005.

Accessed at <http://www.cdc.gov/std/stats/trends2005.htm>

Treatment using the drugs azithromycin or doxycycline, taken orally, have cure rates of 97 percent and 98 percent, respectively, with a recommendation that for those and other therapies, medications should be dispensed on site and the first dose should be directly observed. Patients should be instructed to refer their sex partners for evaluation, testing, and treatment.

Genital Herpes

Genital herpes caused by herpes simplex virus (HSV) is a

chronic, life-long genital infection that affects at least 50 million persons in the United States. The majority of persons with it are probably unaware that they are infected, since they may not have experienced the classic painful multiple vesicular or ulcerative lesions. Asymptomatic persons shed virus intermittently in the genital tract, however, and most genital herpes infections are transmitted by persons unaware that they have the infection. Many persons with first-episode herpes have mild clinical manifestations but later develop severe or prolonged symptoms. Therefore, the guidelines say, “patients with initial genital herpes should receive antiviral therapy” such as acyclovir, famciclovir, or valacyclovir, taken orally several times a day for seven to ten days, with treatment extended if healing is incomplete after ten days of therapy. Counseling is often recommended to help patients cope with the infection--“The psychological effect of HSV infection frequently is substantial.” The guidelines also note that recent studies indicate that latex condoms, when used consistently and correctly, might reduce the risk for genital herpes transmission.

HPV Infection

Human papillomavirus (HPV) infection has gotten attention as the result of controversies over whether a new vaccine against some high-risk forms of HPV should be administered to young girls as a condition of school attendance. The guidelines note that there are more than 100 types of HPV, of which more than 30 can infect the genital area and five of which (types 16, 18, 31, 33, and 35) are identified as “high risk,” meaning they may in some cases proceed to cervical cancer. The guidelines also note that HPV infections of the genital area are extremely common, are usually asymptomatic and unrecognized, and tend to be self-limited. “Genital HPV infection frequently goes away on its own, and no therapy has been identified that can eradicate infection.” The guidelines give considerable attention to the subject of genital warts, which are associated with several types of HPV, and point out that removal of the warts possibly reduces but probably does not eradicate HPV infection. “No evidence indicates that the presence of genital warts or their treatment is associated with the development of cervical cancer.”

Pelvic Inflammatory Disease

Adolescents may experience PID, or pelvic inflammatory disease, which comprises a spectrum of inflammatory disorders of the upper female genital tract, with sexually transmitted infections such as gonorrhea or chlamydia often implicated. Acute PID is difficult to diagnose, the guidelines point out, but the condition frequently occurs in adolescents who are sexually active. Many episodes of PID go unrecognized because clinicians fail to recognize nonspecific symptoms such as abnormal bleeding or vaginal discharge, but the guidelines urge “a low threshold” for diagnosis of PID because of its potential to damage reproductive health. Some specialists recommend hospitalization of all patients with PID, so that bed rest and supervised treatment with antibiotics can be initiated,

but outpatient treatment may suffice in women with mild or moderate cases. “The decision to hospitalize adolescents with acute PID should be based on the same criteria used for older women.” The guidelines offer detailed recommendations for antibiotic treatment of PID, both orally and by injection. Male sex partners of women with PID should be examined and treated if they had sexual contact with the patient during the 60 days preceding the patient’s symptoms. Such evaluation and treatment is “imperative,” the guidelines say, because of the strong likelihood of chlamydia and gonorrhea in the sex partner, who may be asymptomatic.

Hepatitis

The guidelines deal with three types of hepatitis—A, B, and C.

A: Half of all reported cases of hepatitis A in the United States have no specific risk factor involved, but when the infection is transmitted through sexual activity, it is believed to involve fecal-oral contact, meaning that use of other STD preventive measures such as condoms may not be successful in interrupting outbreaks. Prevention can be achieved through vaccination; hepatitis A vaccine is available to adolescents up to age 19 years through the Vaccines for Children program.

B. Hepatitis B vaccination is recommended for all unvaccinated adolescents. The condition can be self-limited or chronic, with increased risk of liver damage in chronic cases. The guidelines note that hep B infection is not spread by hugging, coughing, food or water, sharing eating utensils or drinking glasses, or casual contact, and infected adolescents should not be excluded from school. No specific therapy is available; treatment is supportive. The primary risk factors associated with infection in adolescents are unprotected sex with an infected partner, unprotected sex with more than one partner, a history of other STDs, and illegal injecting-drug use.

C. Hepatitis C virus infection is the most common chronic bloodborne infection in the United States, with approximately 2.7 million persons chronically infected. The role of sexual activity in the transmission of hepatitis C has been controversial; some 20 percent of persons with acute HCV infection have no other risk factors than sexual activity, and the overall conclusion is that sexual transmission of C is “possible but inefficient.”

HIV

Infection with the human immunodeficiency virus (HIV) produces a spectrum of disease that progresses from a clinically latent or asymptomatic state to AIDS as a late manifestation. The majority of adolescents infected with HIV remain symptom-free for extended periods, but viral replication is active during all stages of infection and increases substantially as the immune system deteriorates. In the absence of treatment,

AIDS will develop eventually in nearly all HIV-infected persons. The guidelines urge that all persons who seek evaluation and treatment for STDs should be tested for HIV, but only with the patient's knowledge and understanding. When HIV is found in a teenager, considerable psychological distress can be expected and it is wise to refer the adolescent to a physician experienced in dealing with pediatric HIV. All pregnant women should be tested for HIV as early in the pregnancy as possible, since the risk of perinatal HIV transmission to the infant can be substantially reduced by the use of antiretroviral regimens. HIV-infected persons should be encouraged to notify their partners and to refer them for counseling and testing; if the patients are unwilling, physicians or health departments should use confidential partner notification procedures.

Syphilis

Syphilis is a systemic disease caused by *T. pallidum*. Patients may seek treatment for signs of primary infection, such as ulcer at the infection site, or for secondary infection, which may be characterized by skin rash or mucocutaneous lesions, or for tertiary infection, which may have cardiac, vision, or auditory manifestations. There is also latent syphilis, which may lack all clinical signs. Penicillin G, administered by injection, is the preferred drug for treatment of all stages of syphilis and has been used for more than 50 years. For persons who are allergic to penicillin, the guidelines recommend desensitization and then treatment with penicillin; there is very little data so far on possible alternatives to penicillin for treatment. All women should be screened for syphilis during the early stages of pregnancy; most states mandate screening at the first prenatal visit. Penicillin is effective for preventing maternal transmission to the fetus, but some babies are born with congenital syphilis and require treatment with penicillin as neonates or in infancy or childhood.

Editor's Note:

This brief summary of the sections relative to adolescents in the 2006 edition of the Centers for Disease Control and Prevention's Sexually Transmitted Diseases Treatment Guidelines is not intended as medical advice on the diagnosis and treatment of sexually transmitted diseases in adolescents. For more specific information, health care providers may check the guidelines, which include suggestions for ways to elicit information from prospective patients and clinical recommendations for specific treatments of various infections. The Sexually Transmitted Diseases Treatment Guidelines were published in Morbidity and Mortality Weekly Report Recommendations and Reports August 4, 2006, and are available on the website of the Centers for Disease Control and Prevention at www.cdc.gov.

Related article:

'Our Voices: Our Lives,' A Report on Youth and STDs, www.healthinschools.org/ejournal/2004/mar1.htm.

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