CDC Updates Guidelines on STD Treatment

BY DOUG BRUNK

Revised gonorrhea treatment regimens and expanded STD prevention recommendations are key features in the updated Sexually Transmitted Diseases Treatment Guidelines released in December 2010 by the Centers for Disease Control and Prevention.

Dr. Kimberly A. Workowski of the division of STD prevention at the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, chaired the effort and wrote the guidelines with her colleague, Dr. Stuart Berman, after consulting with numerous experts. The guidelines, last updated in 2006, are available online at www.cdc.gov/std/treatment/2010 or by contacting CDC-INFO at 800-232-4636.

Gonorrhea treatment regimens were revised in the wake of *Neisseria gonorrhoeae's* decreased susceptibility to cephalosporins and other antimicrobials. In 2007 the CDC recommended that fluoroquinolones not be used for gonorrhea treatment because of resistance to that class of antimicrobials (MMWR 2007;56:332-6).

"What we've been seeing over the past number of decades is change in the *N. gonorrhoeae* organism in different parts of the world," Dr. Workowski said in an interview. "There have been increasing reports of isolates resistant to cephalosporins from Southeast Asia and from Norway."

Because of these developments, patients who present with an uncomplicated urogenital gonorrheal infection should be treated with a single 250-mg intramuscular injection of ceftriaxone. If this is not an option, consider a single 400-mg tablet of cefixime, or a single-dose cephalosporin regimen. To prevent co-infection with *Chlamydia trachomatis*, treatment with azithromycin 1 mg orally in a single dose or doxycycline 100 mg twice a day for 7 days is recommended.

Expanded STD prevention recommendations include support for the pre-exposure human papillomavirus (HPV) vaccine, which the report calls "one of the most effective methods for preventing transmission of some STDs." Two vaccines are currently available: the quadrivalent HPV vaccine (Gardasil; Merck), which also prevents genital warts, and the bivalent HPV vaccine (Cervarix; GlaxoSmithKline). Routine vaccination of females aged 11 or 12 years is recommended with either vaccine, as is catch-up vaccination for females aged 13-26 years. More information regarding HPV vaccination can be found at www.cdc.gov/std/hpv.

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Other changes that differ from the 2006 guidelines include:

► **New treatment regimens for genital warts and bacterial vaginosis.** The list of patient-applied options for treating external genital warts now includes sinecatechins 15% ointment, a green-tea extract. "We don't know exactly how it works from a scientific standpoint," said Dr. Workowski, who is also an associate professor of medicine at Emory University, Atlanta. "But in published studies it has done well for genital warts, so it's another alternative."

The guidelines recommend applying a 0.5-cm strand of ointment to each wart three times per day until complete clearance of warts. "This product should not be continued for longer than 16 weeks," the recommendations state. "The medication should not be washed off after use. Sexual (i.e., genital, anal, or oral) contact should be avoided while the ointment is on the skin. The most common side effects of sinecatechins 15% are erythema, pruritus/burning, pain, ulceration, edema, induration, and vesicular rash."

The list of alternative regimens for treating bacterial vaginosis now includes tinidazole 2 g orally once daily for 2 days or tinidazole 1 g orally once daily for 5 days.

► **Increasing awareness of lymphogranuloma venereum proctocolitis.** Lymphogranuloma venereum is a disease that causes enlarged lymph nodes in the inguinal-femoral area, and it can also cause an infection in the rectum, Dr. Workowski said. Lymphogranuloma venereum proctocolitis can present as rectal bleeding or rectal pain "and is being increasingly recognized in men who have sex with men, particularly in HIV-infected men who have sex with men," she said. "It can also occur in women who engage in receptive rectal intercourse," and should be part of the differential diagnosis in anyone who engages in receptive anal intercourse and presents with a bloody discharge or pain around the rectal area.

► **The emergence of azithromycin-resistant *Treponema pallidum*.** Penicillin remains the treatment of choice for syphilis. In those with allergy to penicillin, a 14-day course of doxycycline 100 mg orally twice daily or a 14-day course of tetracycline 500 mg four times daily is recommended. "Azithromycin as a single 2-g oral dose is effective for treating early syphilis," according to the guidelines. "However, *T. pallidum* chromosomal mutations associated with azithromycin resistance and treatment failures have been documented in several areas in the United States. As such, azithromycin should be used with caution only when treatment with penicillin or doxycycline is not feasible."

► **Discussion of the role of *Mycoplasma genitalium* and trichomoniasis in the evaluation of urethritis and cervicitis and treatment-related implications.** While *N. gonorrhoeae* and *C. trachomatis* are well established as clinically important infectious causes of urethritis, *M. genitalium* has also been associated with urethritis. "If clinic-based diagnostic tools (e.g., Gram-stain microscopy, first void urine with microscopy, and leukocyte esterase) are not available, patients should be treated with drug regimens effective against both gonorrhea and chlamydia," the guidelines state. "Further testing to determine the specific etiology is recommended because both chlamydia and gonorrhea are reportable to health departments and a specific diagnosis might improve partner notification and treatment."

The guidelines note that culture, nucleic acid hybridization tests, and nucleic acid amplification testing (NAAT) are available for the detection of both *N. gonorrhoeae* and *C. trachomatis*. "Culture and hybridization tests require urethral swab specimens, whereas NAATs can be performed on urine specimens. Because of their higher sensitivity, NAATs are preferred for the detection of *C. trachomatis*."

► **Revised guidance on the evaluation of neurosyphilis.** Laboratory diagnosis of neurosyphilis usually depends on various combinations of reactive serologic test results, cerebrospinal fluid (CSF) cell count or protein, and a reactive CSF-Venereal Disease Research Lab [VDRL] test with or without clinical manifestations.

"Among persons with HIV infection, the CSF leukocyte count usually is elevated (greater than 5 white blood cell count/mm^3); using a higher cutoff (greater than 20 white blood cell count/mm^3) might improve the specificity of neurosyphilis diagnosis," the guidelines state. "The CSF-VDRL might be nonreactive even when neurosyphilis is present; therefore, additional evaluation using FTA-ABS [fluorescent treponemal antibody absorbed] testing on CSF can be considered. The CSF FTA-ABS test is less specific for neurosyphilis than the CSF-VDRL but is highly sensitive; neurosyphilis is highly unlikely with a negative CSF FTA-ABS test."

Dr. Workowski and Dr. Berman emphasized that the guidelines "should be regarded as a source of clinical guidance and not prescriptive standards; health care providers should always consider the clinical circumstances of each person in the context of local disease prevalence. They are applicable to various patient-care settings, including family-planning clinics, private physicians' offices, managed care organizations, and other primary care facilities." ■

Drug-Resistant *Klebsiella pneumoniae* Is a Growing Problem

BY ROBERT FINN

FROM THE ANNUAL MEETING OF THE INFECTIOUS DISEASES SOCIETY OF AMERICA

VANCOUVER, B.C. – There's a new bad bug on the block, and it appears to be making appearances in long-term care facilities, at least in the Chicago area, according to a recent study.

Carbapenem-resistant Enterobacteriaceae, particularly those that produce *Klebsiella pneumoniae* carbapenemase (KPC), are becoming increasingly problematic in the Chicago area, Dr. Mary K. Hayden said during a press briefing. The first case appeared in Chicago in December 2007, but by March 2009 an Internet-based survey of infection preventionists revealed that 26 of 53 facilities (49%) had reported one case, and the mean number of cases per facility was 3.8.

In a subsequent survey in February 2010, 37 of 57 facilities (65%) had reported at least 1 case, and the mean number of cases per facility was 10.2.

According to the 2009 survey, 81% of the affected patients had been transferred from a long-term care facility or a long-term acute care hospital. In 2010, 75% of patients came from such facilities.

Dr. Hayden, of Rush University Medical Center, Chicago, declined to refer to KPC as a "superbug," a term favored in the popular press, but she did say, "I think it is an organism that should be identified as requiring particular attention. [It] can cause serious, life-threatening infections in hospitalized patients."

These organisms, aerobic gram-negative bacilli, produce infections that are particularly difficult to treat because they're resistant to most and sometimes to all available antibiotics.

"This rapid increase in KPC is not unique to the Chicago area," Dr. Hayden said. "KPC was first identified in North Carolina in the late 1990s, and over the next 10 years remained restricted to the East Coast, causing significant morbidity and mortality in areas such as Brooklyn, N.Y. But in the last couple of years, KPC has spread globally, with reports now from multiple areas in the United States and from South America, Europe, and Asia. An extreme example was seen in Israel, which reported a nationwide outbreak of KPC only about 2 years after their first case was identified."

Dr. Hayden said that her team believes their findings point to the need for a regional approach to KPC control. "It will require coordinated collaboration between acute care hospitals, long-term care facilities, and public health [departments]," she said.

Dr. Hayden stated that she had no relevant financial disclosures. ■