

Fusarium Keratitis Cases Spur Call for Vigilance

BY MARY ANN MOON
Contributing Writer

The recent outbreak of fusarium keratitis that spread to 33 states carried “a high degree of morbidity,” with corneal transplantation required or planned for 55 of the 164 affected patients identified, reported Dr. Douglas C. Chang of the Centers for Disease Control and Prevention, Atlanta, and his associates.

The outbreak was linked to ReNu contact lens solution with MoistureLoc. The mechanism of infection remains uncertain, but researchers think that contamination of the contact lens solution occurred well after manufacturing and distribution, probably in the patients’ homes.

“This outbreak may have been caused by a complex and as yet undetermined interaction between MoistureLoc, fusarium, and possibly the lens case or contact lens,” they said.

“Clinicians should be vigilant in diagnosing and treating fungal keratitis, and users of MoistureLoc should discontinue the use of this product,” the CDC investigators said (JAMA 2006;296:953-63).

In an editorial, Dr. Todd P. Margolis and Dr. John P. Whitcher of the University of California, San Francisco, said filamentous fungal keratitis is “notoriously difficult to treat,” and fusarium keratitis is “truly a therapeutic challenge.”

Many patients require adjuvant surgery ranging from recurrent corneal debridement to corneal transplantation, but the visual outcome is often dismal.”

Early treatment appears to improve the likelihood of resolving the infection. Clinicians should be alert for general signs and symptoms of keratitis, including redness,



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tearing, pain, light sensitivity, discharge, decreased vision, and a white corneal infiltrate, they noted (JAMA 2006;296:985-7).

Specific signs of fungal keratitis—such as a corneal stromal infiltrate with “feathery edges,” satellite lesions, a ring infiltrate, a posterior endothelial plaque, or a waxing and waning hypopyon—have been absent in some of the recent cases.

“A high index of suspicion and appropriate diagnostic studies, including cytological staining and microbiological cultures of material from the involved site” are key, they said.

Just as important is avoiding the use of topical ophthalmic corticosteroids before commencing antifungal therapy. Although corticosteroids are contraindicated in

these cases, the drugs “are commonly prescribed by physicians for patients with complaints of acute red eyes, frequently by telephone and without a physical evaluation.”

Approximately one-fourth of cases assessed in earlier studies had been inappropriately treated with ophthalmic corticosteroids.

“Clinicians must immediately cease this potentially harmful practice,” the editorial writers emphasized.

Dr. Chang and his associates noted that Bausch & Lomb Inc., manufacturer of MoistureLoc contact lens solution, permanently withdrew the product from the market in May after reviewing preliminary CDC data on the outbreak, which began in

June 2005 and peaked in April 2006.

The CDC began investigating the outbreak in March 2006, after a New Jersey ophthalmologist reported treating three patients who had contact-lens-associated fusarium keratitis during the preceding 2 months.

Fungal keratitis is rare, and fusarium keratitis comprises less than 5% of microbial infections in contact lens wearers. The filamentous fungus is commonly found in soil, plants, and water sources in tropical or subtropical regions.

In 2004, 10 U.S. labs reported positive fusarium cultures from ocular specimens in only 12 cases.

As of June 30, the CDC had received 318 reports of fusarium keratitis in 2006. Of those, 164 cases had been confirmed and 32 had been categorized as possible. Most patients were adults, but 16 (10%) were children or adolescents.

Of the 164 confirmed cases, 37 infections (23%) had resolved with topical or systemic antifungal therapy, 65 (40%) had not yet resolved and are still being treated with antifungals, and 55 (34%) required or were awaiting corneal transplant because of active disease, residual scarring, or both.

In the month preceding infection, 69% of the keratitis patients reported using MoistureLoc contact lens solution, compared with 15% of control subjects.

At least 10 fusarium species were cultured from patient specimens and from samples from opened lens cases or bottles of solution, but no contamination was detected in unopened bottles of solution or in any of hundreds of samples taken at the manufacturing plant and distribution warehouse. ■

Teens Face Unique Risks for STDs—Biological to Behavioral

BY MARY ELLEN
SCHNEIDER
Senior Writer

NEW YORK — Adolescents are disproportionately affected by sexually transmitted diseases due to biological, psychological, cognitive, and behavioral factors, as well as poor access to health care, Dr. Robin Recant said at a gynecology conference sponsored by Mount Sinai School of Medicine.

Female adolescents are biologically at higher risk for STDs such as chlamydia and gonorrhea because of the columnar epithelium on their ectocervix, said Dr. Recant, of the New York City Department of Health and Mental Hygiene Bureau of Sexually Transmitted Disease Control.

Both chlamydia and gonorrhea preferentially attach to the columnar epithelium, she said. Also, HIV acquisition and shedding may be increased with cervical ectopy.

Mucus production in the adolescent female is increased, but

the mucus is thinner than in older women, which may make it easier for pathogens to attach to the epithelium. Adolescent females also have lower vaginal pH, though there are no studies on the significance of this in terms of STD infection, Dr. Recant said.

Psychological and cognitive factors also make both female and male adolescents more vulnerable.

For instance, these young adults may not appreciate the consequences of their actions. “Their lack of foresight is often compounded by the use of drugs and alcohol,” Dr. Recant said.

Adolescents also may have difficulty with complex, ordered tasks, such as correct condom use.

And they may use sexual activity as a form of rebellion against their parents.

Adolescents are likely to experiment both with relationships

and sexual behaviors. And since they are going through a formative stage of social development, it may be hard for them to negotiate with older sex partners, she said.

On the behavioral front, sexually active adolescents frequently have multiple sex partners, putting them at greater risk for STDs.

‘[Teens] may not even be able to distinguish whether aspects of their health are physically normal or abnormal because their bodies are changing so rapidly.’

Adolescents are frequently serial monogamists who have a series of short-lived sexual relationships, Dr. Recant said.

The 2003 results of the Youth Risk Behavior Survey show that 53% of male high school students in New York City had had sexual intercourse and that 39% of female high school students

had. In addition, the survey finds that 8% of female high school students and 25% of male high school students in New York City have had four or more sexual partners in their lifetime.

Trends over the past 10 years show an overall increase in the use of condoms by adolescents, Dr. Recant said, but that use decreases with the duration of the relationship and with age.

Similar trends appear in data from the 2003 Youth Risk Behavior Survey. The survey shows that among females, condom use dropped from 78% among 9th graders to 64% among girls in the 12th grade.

Condom use was higher in males but dropped from a high of 90% in 10th graders to 82% in 12th graders.

Adolescents may face greater risk from inadequate access to health care, and generally obtain health care services less often than older or younger individuals, Dr. Recant said. Also, some

may not recognize the symptoms of a sexually transmitted disease or may be too embarrassed to seek care.

“Adolescents may not even be able to distinguish whether aspects of their health are physically normal or abnormal because their bodies are changing so rapidly,” Dr. Recant said.

Confidentiality is another issue. Adolescents are more likely to seek care from physicians and other providers who ensure confidentiality, she said.

Some physicians contribute to the problem because they may not be comfortable discussing sexual behavior with adolescents. Sometimes physicians and other providers fail to take a sexual history or screen as recommended, she said.

Cost can be a barrier for adolescents.

Those with insurance coverage may be afraid that their parents will see the diagnosis when they get the bill for the appointment, Dr. Recant said. ■