

Invasive Candidiasis Rates Higher at Academic Centers

BY BRUCE JANCIN
Denver Bureau

DALLAS — The incidence of invasive candidiasis is more than 50% greater in academic medical centers than in community hospitals, although the distribution of *Candida* species is similar in both settings, according to the national Candida Surveillance Study.

During the survey period of 2004-2006, most cases in both academic and community hospitals were caused by species other than *C. albicans*, most commonly *C. glabrata*, which accounted for almost 25% of all cases of invasive candidiasis nationally, Patricia Hoover reported at the annual meeting of the Society of Hospital Medicine.

This 1-in-4 proportion of invasive candidiasis caused by *C. glabrata* is of clinical relevance because this organism is less susceptible to fluconazole than is *C. albicans* or other *Candida* species, according to Ms. Hoover of Merck & Co., which sponsored the national study.

Two independent risk factors for invasive *C. glabrata* infection emerged from the study. The incidence was 46% greater in women than in men, and the infection was 25% more common in patients aged 18 or older than in those younger than 18.

Based on these findings, it's advisable for physicians who treat primarily adults and/or practice at an institution with a high *C. glabrata* rate to consider using an antifungal agent other than fluconazole for

empiric therapy until the lab identifies the specific causative *Candida* species, she continued.

The Candida Surveillance Study involved 33 nationally representative academic and 8 community hospitals that collectively contributed 3,503 isolates from patients with invasive candidiasis for species identification at a core lab.

The annualized incidence of invasive candidiasis in community hospitals was 11.5 cases/10,000 discharges, compared with 18.2 cases/10,000 discharges in the academic hospitals.

The prevalence of *C. albicans* in patients with invasive candidiasis who had received antifungal prophylaxis was 39.6%, compared with a 45.9% prevalence in those without prophylaxis. This represented a significant 14% relative risk reduction. Consideration should be given to this finding in selecting empiric antifungal therapy, she said.

A wide range of underlying diseases was present in patients who developed invasive candidiasis. GI disorders were the most common, being present in 7.5% of all cases, followed by diabetes, present in 6.4%, and solid organ malignancy in 6.0%. Recent abdominal surgery was deemed the trigger in 4.1% of all cases.

In the 1980s, *C. albicans* was the cause of most invasive candidiasis in the United States. That changed in the 1990s, as the proportion of invasive candidal infections caused by *C. albicans* decreased to about 45%, mainly because of a rise in *C. glabrata* infections. ■

Shorter Course of Once-Daily Cefdinir Treats Skin Infections

BY SHERRY BOSCHERT
San Francisco Bureau

LOS ANGELES — Taking cefdinir once instead of twice daily for 7 instead of 10 days successfully treated uncomplicated skin and skin structure infections in a small randomized study.

The study of 64 clinically evaluable patients who were randomized to treatment with one of two oral cephalosporins was not powered to endorse the shorter therapy conclusively. That would require thousands of patients, Dr. George J. Murakawa said at the annual meeting of the Society for Investigational Dermatology.

Previous studies, however, have proved the efficacy of treating uncomplicated skin and skin structure infections with either cephalexin 250 mg q.i.d. for 10 days or cefdinir 300 mg b.i.d. for 10 days. The current study randomized patients to the standard cephalexin regimen or two capsules of cefdinir (600 mg) once daily for 7 days.

The treatment cured the infections in 31 of 32 patients on cephalexin and 30 of 32 patients on cefdinir, said Dr. Murakawa of Michigan State University, East Lansing. Dr. Murakawa is a speaker for Abbott Laboratories, which markets cefdinir and funded this study.

"You don't necessarily need to use the standard 10-day course" of cefdinir, he said. "Once-daily doses worked very well. All patients cleared, even those with methicillin-resistant *Staphylococcus aureus*."

A physician in the audience said that the high rate of cure seen with cephalexin suggests that it, too, might work with fewer daily doses and a shorter course of therapy.

The infections included folliculitis (10 patients), abscesses (8), cellulitis (6), furuncle or carbuncle (13), impetigo (19), paronychia (2), and wound infection (6).

The treating physician was blinded to the medication, which was dispensed by a third party. Patients were asked not to disclose information about randomization. The physician incised and drained pustules. A specimen was collected from all patients for culture, and 50 grew out an organism.

Of 26 cultures that grew *S. aureus*, 7 were resistant to methicillin. All patients with *S. aureus* infection were cured in both treatment groups regardless of methicillin resistance, Dr. Murakawa said.

More patients were compliant with the cefdinir regimen than with cephalexin.

Bacterial skin infections are one of the most common problems seen by physicians, comprising 14% of all skin-related visits to internists, he noted. ■

Quick Biopsy Is Needed for Phaeohyphomycosis Diagnosis

BY SHARON WORCESTER
Southeast Bureau

DESTIN, FLA. — Phaeohyphomycosis usually results from infection by *Bipolaris* fungi, and it requires wide debridement and immediate treatment with massive doses of itraconazole to reduce the fungal burden, Dr. Dirk Elston said at a meeting sponsored by the Alabama Dermatology Society.

Because the typical empirical treatments for more common fungal infections—such as amphotericin—will not work in this potentially fatal condition, consider this diagnosis, particularly in immunocompromised patients, who tend to develop invasive disease, he advised.

A quick biopsy and a good dermatopathologist are key. "You've got a window of opportunity to treat [these patients]. You have one chance to treat them right, and even with the right treatment they may succumb. But without that, they don't even have a chance," said Dr. Elston, who is director of the department of dermatology at Geisinger Medical Center in Danville, Pa.

Clues to the diagnosis are the presence of a thick refractile wall (as seen with mucormycosis) on histology, and bubbly cytoplasm (as seen with aspergillus or fusarium).

"You've got it nailed based on that [combination]. It's a black mold, a *phaeo* organism," he said.

He described a case involving a ventilator-dependent infant who developed what appeared to be multiple bedsores. Because of the ventilator, nurses had been unable to rotate the baby, who was born at 22 weeks' gestation in a septic environment following a car accident that resulted in a traumatic placental abruption in the mother.

When the infant was finally able to be rotated, the nurses discovered the le-

sions. A closer look revealed that the lesions were not bedsores, but fungal sepsis.

The lesions consisted of a black, leathery, depressed central eschar and an "almost bullous edematous scalloped border," Dr. Elston explained, noting that they appeared similar to fungal embolic lesions that occur commonly in leukemia patients.

A biopsy was performed and phaeohyphomycosis was diagnosed, but the infant died despite aggressive therapy.

An autopsy revealed that the fungus had invaded every organ in the child's body, he said.

In another case, a diabetic patient with contact dermatitis from his shoes developed invasive phaeohyphomycosis that resulted in bilateral above-the-knee amputations.

"They basically chopped his legs off a bit at a time, starting with forefoot, then hindfoot, then [below-the-knee amputation], then above-the-knee, as this plowed through tissue" he said, noting that the patient was never put on itraconazole but was treated with amphotericin.

"The wrong drug [was used] ... so nailing the organism is really important for this," he said, reiterating the need for early diagnosis to determine the appropriate course of treatment.

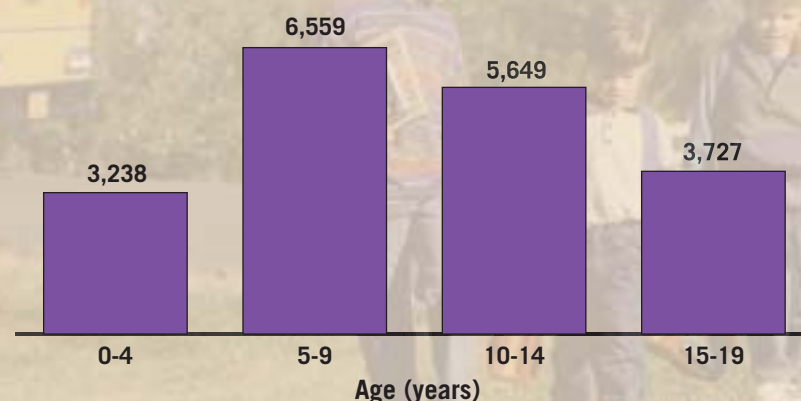
Common manifestations of phaeohyphomycosis include tinea nigra, particularly in hot, humid climates, and phaeohyphomycotic cysts. These tend to develop in immunocompetent patients with these types of infections, whereas invasive disease occurs almost exclusively in immunocompromised patients, Dr. Elston said.

Morphology, rather than a Fontana-Masson stain for the characteristic melanin in the cell wall, should be relied upon for diagnosis in these infections, because Fontana-Masson will stain melanin in a variety of other conditions as well, he noted. ■

'You have one chance to treat them right, and even with the right treatment they may succumb.'

DATA WATCH

Children Aged 5-9 Years Accounted for the Highest Number Of New Lyme Disease Cases



Source: 2003-2005 data, Centers for Disease Control and Prevention