

Rates of Invasive Candidiasis 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 co-occurring conditions, 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. ■

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Algorithm Cuts Pneumonia Hospitalizations in Elderly

BY KATE JOHNSON
Montreal Bureau

MONTREAL — Hospitalization can be reduced by more than half among nursing home residents with pneumonia and other lower respiratory tract infections, with no compromise in morbidity or mortality, Dr. Mark Loeb said at an international conference on community-acquired pneumonia.

"Pneumonia is the most important reason why residents are transferred to hospital, but hospitalization can lead to functional decline, infection with multiresistant organisms, urinary tract infections, and delirium," said Dr. Loeb of the department of pathology and molecular medicine at McMaster University, Hamilton, Ont.

Reducing the rate of hospitalization in this population would not only avoid these potential hazards, but also reduce the overall burden on the health care system, an issue "which has particular relevance for pandemic planning," he noted at the conference, which was sponsored by the International Society for Chemotherapy. "Most pandemic plans tend to ignore the long-term care facilities—they basically focus on the acute care setting—but a very relevant issue is when there's a pandemic, what happens to nursing home residents? Do they get sent to the acute care hospital for management, or do we just manage them on-site?"

A study by Dr. Loeb and his colleagues randomized 680 nursing home residents with pneumonia or other lower respiratory tract infections to either usual care or treatment according to a clinical algorithm designed to encourage on-site care (JAMA 2006;295:2503-10).

Patients were eligible to be treated on-site only if they could eat and drink and had stable vital signs; otherwise, they were transferred to a hospital. ■

The clinical algorithm involved the use of oral antimicrobials, portable chest radiographs, oxygen saturation monitoring, rehydration, and close monitoring by a research nurse.

Only 10% of patients randomized to the algorithm were hospitalized, compared with 22% of the usual care patients, Dr. Loeb said at the meeting. Over the 30-day follow-up, there were no significant differences in quality of life scores, functional status, or mortality (8% in the algorithm group vs. 9% in the usual care group), but there was a marked reduction in cost associated with the treatment algorithm.

Although the initial cost was \$87 more per resident in the algorithm vs. usual care groups (because of the up-front cost of oxygen and hydration therapy, mobile radiographs, and administration), this was offset by reduced professional billing, transportation, and hospitalization costs, he said. Overall, the algorithm resulted in a saving of \$1,016 (in U.S. dollars) per patient, based on the Canadian health care costs. Using U.S. prices, the saving was \$1,517 (in U.S. dollars). The researchers estimated that the clinical algorithm could save \$831 million annually among the approximately 1.5 million elderly residents in U.S. nursing homes.

Dr. Loeb and his coauthors acknowledged that health care funding in the United States could pose a barrier to the implementation of such an algorithm because, unlike in Canada, the costs of implementation would be shouldered by the nursing home, while the resulting savings would be realized by the hospital.

"Prospective payment and flat-rate systems of Medicare reimbursement to nursing homes represent financial disincentives to have residents treated on-site in the nursing home," they wrote. "Therefore, nursing homes would need to receive supplemental funding to implement the pathway [algorithm]." ■

Community-Acquired Pneumonia Outcomes No Worse in Patients With HIV Infection

BY ROBERT FINN
San Francisco Bureau

SAN FRANCISCO — Patients with HIV do just as well as patients without the virus when faced with bacterial community-acquired pneumonia, according to a poster presentation by Dr. Maricar Malinis at the International Conference of the American Thoracic Society.

Dr. Malinis, of the University of Louisville (Ky.), and colleagues concluded that "the decision to hospitalize a patient [with community-acquired pneumonia] should not be based on the HIV status, but rather on the severity of illness."

The investigators conducted a large, retrospective study based on a database maintained by the Community-Acquired Pneumonia Organization (CAPO).

The CAPO database is the result of an international cohort study of patients with community-acquired pneumonia (CAP) hospitalized between 2001 and 2006.

Dr. Malinis and associates included in their analysis a

total of 2,908 patients, of whom 118 (4.1%) were HIV positive.

There were no significant differences between the groups in all-cause mortality or CAP-related mortality, measured at hospital discharge.

In the unadjusted results, there were significant differences between the groups in the time to reach clinical stability and length of hospital stay.

In both measures, patients with HIV did better than patients without HIV.

But the statistical differences disappeared when the results were adjusted for significant demographic and clinical covariates.

For example, patients who had HIV were significantly younger on average than patients without the virus (40 years vs. 67 years). Also, more of the HIV-positive patients were men (74% vs. 61%) and fewer of them had a cavitary lesion (9% vs. 20%).

The investigators wrote that the results of the study suggest that, at least in the area of hospitalization, the current national guidelines for managing patients with CAP can be applied to patients who have HIV. ■

Guidelines on Chlamydia Screening Close to Accord

Updated guidelines from the U.S. Preventive Services Task Force on detection of chlamydial infection recommend screening all sexually active, nonpregnant women aged 24 years and younger, as well as older women at increased risk and all pregnant women aged 24 years and younger.

The guidelines, which were last published in 2001, do not recommend screening older women, regardless of pregnancy, if they are not at increased risk. The task force stated that there is not enough evidence to make a recommendation regarding the screening of men.

The updated recommendations are similar to those of the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, and the Centers for Disease Control and Prevention, with the difference that these organizations recommend screening for women aged 25 years and younger.

The updated guidelines document can be found at the Web site of the Agency for Healthcare Research and Quality at www.ahrq.gov/clinic/uspstf07/chlamydia/chlamydiars.htm.

—Leanne Sullivan