

Abstracts of current literature on epidemiology, diagnosis, and treatment

Series Editor: Jihad Slim, MD

## SINGLE-DOSE VERSUS 14-DAY FLUCONAZOLE FOR OROPHARYNGEAL CANDIDIASIS IN HIV PATIENTS

Investigators conducted a prospective, randomized, double-blind, placebo-controlled trial to compare the clinical and mycologic responses, relapse rates, and safety of single-dose (750 mg) oral fluconazole versus the standard 14-day course of oral fluconazole (150 mg/day) for treating oropharyngeal candidiasis in HIV-infected adults. Patients with confirmed oropharyngeal candidiasis were recruited from an HIV clinic (Dar es Salaam, Tanzania) between November 2006 and December 2007 and received either single-dose ( $n = 110$ ) or 14-day fluconazole ( $n = 110$ ). Clinical cure occurred in 105 (95.5%) patients taking 14-day fluconazole and in 104 (94.5%) patients taking single-dose fluconazole, with no significant difference in clinical efficacy between the 2 groups (odds ratio [OR], 0.825 [95% confidence interval [CI], 0.244–2.789];  $P = 0.99$ ). Likewise, mycologic cure occurred in 83 (75.5%) patients taking 14-day fluconazole and in 93 (84.5%) patients taking single-dose fluconazole, with no significant difference in mycologic efficacy between the 2 groups (OR, 1.780 [95% CI, 0.906–3.496];  $P = 0.129$ ). Drug-related adverse events were uncommon and were similar between the treatment groups. Single-dose fluconazole was as safe and effective as standard 14-day therapy in HIV-infected patients who had oropharyngeal candidiasis coinfection.

*Hamza OJM, Matee MIN, Brüggemann RJM, et al. Single-dose fluconazole versus standard 2-week therapy for oropharyngeal candidiasis in HIV-infected patients: a randomized, double-blind, double-dummy trial. Clin Infect Dis 2008;47:1270–6.*

## EPIDEMIOLOGY AND PROGNOSIS OF HEALTH CARE-ASSOCIATED INFECTIVE ENDOCARDITIS

Researchers conducted a prospective, observational cohort study to describe the features of health care-associated infective endocarditis (HAIE) and to identify risk factors for mortality. Between 2000 and 2007, all adult patients presenting consecutively to a teaching hospital (Barcelona, Spain) with definite or possible IE were enrolled. Of 292 episodes of IE that occurred in 289 patients, 83 (28.4%) were HAIE. As compared with community-acquired IE patients, HAIE patients were older (median age  $\pm$  SD, 65.3  $\pm$  16.4 yr versus 57.8  $\pm$  17.0 yr;  $P = 0.001$ ), had poorer health before disease onset (Charlson index  $\pm$  SD, 2.5  $\pm$  2.3 versus 1.7  $\pm$  2.1;  $P = 0.006$ ), had more staphylococcal (55.4% versus 28.3% of cases) and enterococcal infections (22.9% versus 7.7% of cases), underwent fewer surgeries (22.9% versus 45.9% of cases;  $P < 0.005$ ), and experienced higher in-hospital (45.8% versus 22.0%) and 1-year mortality (59.5% versus 29.6%;  $P < 0.005$ ) rates. Stroke (OR, 8.95 [95% CI, 2.04–39.31];  $P = 0.004$ ), congestive heart failure (OR, 5.48 [95% CI, 1.77–17.03];  $P = 0.003$ ), indicated surgery not per-

formed (OR, 3.74 [95% CI, 1.22–11.45];  $P = 0.021$ ), and enterococcal infection (OR, 0.18 [95% CI, 0.04–0.78];  $P = 0.022$ ) independently predicted in-hospital death for HAIE patients. Likewise, acute renal failure (OR, 7.18 [95% CI, 1.32–39.18];  $P = 0.023$ ), indicated surgery not performed (OR, 7.81 [95% CI, 2.06–29.67];  $P = 0.003$ ), and enterococcal infection (OR, 0.18 [95% CI, 0.04–0.81];  $P = 0.026$ ) independently predicted 1-year mortality for HAIE patients. Overall, HAIE independently predicted in-hospital (OR, 2.83 [95% CI, 1.34–5.98];  $P = 0.007$ ) and 1-year mortality (OR, 2.59 [95% CI, 1.25–5.39];  $P = 0.011$ ). HAIE is associated with considerable mortality.

*Fernández-Hidalgo N, Abmirante B, Tomos P, et al. Contemporary epidemiology and prognosis of health care-associated infective endocarditis. Clin Infect Dis 2008;47:1287–97.*

## TMP-SMX- AND FLUOROQUINOLONE-RESISTANT E. COLI INFECTION IN PATIENTS WITH PYELONEPHRITIS

The authors conducted a cross-sectional study of adult patients with pyelonephritis presenting to 11 US emergency departments (2001–2004) to determine the prevalence of *Escherichia coli* resistance to trimethoprim-sulfamethoxazole (TMP-SMX) and fluoroquinolones. Of 689 included cases of pyelonephritis due to a single uropathogen, *E. coli* caused 403 (94%) of 429 uncomplicated cases and 207 (80%) of 260 complicated cases. Of the uncomplicated cases, mean site rates of *E. coli* resistance were TMP-SMX, 24%; ciprofloxacin, 1%; and levofloxacin, 3%. Of 384 patients with TMP-SMX resistance, only TMP-SMX exposure within 2 days before presentation (5 [100%] of 5 isolates) and Hispanic ethnicity (57 [39%] of 145 isolates tested) were associated with *E. coli* resistance to TMP-SMX. In contrast, women who did not have these features had lower resistance rates (96 [25%] of 377 isolates presenting after day 2 and 45 [19%] of 239 isolates from non-Hispanic women). Of the complicated cases, mean site rates of *E. coli* resistance for ciprofloxacin and levofloxacin were 5% and 6%, respectively. TMP-SMX-resistant infection prevalence among patients with uncomplicated pyelonephritis may be 20% or higher in many areas of the United States. Fluoroquinolone-resistant *E. coli* infection appears to be low but is more common in patients with complicated infections. Fluoroquinolones should remain the preferred empirical treatment for women with uncomplicated pyelonephritis.

*Talan DA, Krishnadasan A, Abrahamian FM, et al. Prevalence and risk factor analysis of trimethoprim-sulfamethoxazole- and fluoroquinolone-resistant Escherichia coli infection among emergency department patients with pyelonephritis. Clin Infect Dis 2008;47:1150–8.*

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