

Infectious Diseases Update

Abstracts of current literature on epidemiology, diagnosis, and treatment

Series Editor: Jihad Slim, MD

NASAL CARRIAGE OF STAPHYLOCOCCUS AUREUS AS A SOURCE OF BACTEREMIA

Two studies were conducted to assess the correlation between strains of *Staphylococcus aureus* colonizing the anterior nares and strains in the blood of patients with *S. aureus* bacteremia to determine whether the organisms in the blood originated from the patients' own flora. In the first study (multicenter), swabs were obtained from the anterior nares of 219 patients with *S. aureus* bacteremia and cultured. Isolates (N = 723) were collected and genotyped. If nasal colonization with *S. aureus* was detected, all strains, including those isolated from presumed foci of infection, were collected and characterized by pulsed-field gel electrophoresis. In the second study (single center), *S. aureus* isolates (N = 1640) from nasal swabs from 1278 patients were collected over a period of 5 years and then compared with isolates from the blood of patients in whom bacteremia subsequently developed during the same hospital stay or a later one. In the multicenter study, for most of the strains, the isolates from the blood were identical to those from the anterior nares of the same patients (82.2%). In the second study, 14 of the patients who had nasal colonization developed *S. aureus* bacteremia, and in 12 of these individuals, strains isolated from the anterior nares were clonally identical to the strains isolated from the blood 1 day to 14 months later. The researchers concluded that a substantial proportion of cases of *S. aureus* bacteremia appear to be of endogenous origin.

von Eiff C, Becker K, Machka K, et al. Nasal carriage as a source of *Staphylococcus aureus* bacteremia. *N Engl J Med* 2001;344:11-6.

DISCONTINUATION OF PNEUMOCYSTIS CARINII PROPHYLAXIS IN HIV-INFECTED PATIENTS

A randomized, nonblinded, multicenter trial was conducted to test the hypothesis that primary and secondary prophylaxis against *Pneumocystis carinii* pneumonia can be safely discontinued in HIV-infected patients in whom highly active antiretroviral treatment results in immune reconstitution, as long as their CD4 cell counts remain at 200 or more per mm³. The patients receiving primary prophylaxis (N = 474) had a median CD4 cell count at entry of 342 per mm³, and 240 of those patients were randomly assigned to discontinue prophylaxis. After a median follow-up period of 20 months, there were no episodes of *P. carinii* pneumonia. For the patients receiving secondary prophylaxis (N = 113), the median CD4 cell count at entry was 355 per mm³. Of these patients, 60 were randomly assigned to discontinue prophylaxis. After a median follow-up period of 12 months, there had been no episodes of *P. carinii* pneumonia in the 60 patients. The researchers concluded that in HIV-

infected patients receiving highly active antiretroviral therapy, primary and secondary prophylaxis against *P. carinii* pneumonia can be safely discontinued after the CD4 cell count has increased to 200 or more per mm³ for more than 3 months.

de Quiros JC, Miro JM, Pena JM. A randomized trial of the discontinuation of primary and secondary prophylaxis against *Pneumocystis carinii* pneumonia after highly active antiretroviral therapy in patients with HIV infection. *N Engl J Med* 2001;344:159-67.

GUIDELINES FOR STOOL CULTURES FOR HOSPITALIZED ADULTS

A common hospital policy is to reject stool cultures obtained more than 3 days after patient admission (the 3-day rule). However, enteropathogenic bacteria other than *Clostridium difficile* (EPB) may cause nosocomial illness that would be missed by use of the 3-day rule. A 5-part study was conducted to develop a modified 3-day rule with precise criteria for performance of stool cultures for hospitalized patients and to test whether this modified 3-day rule would allow cost savings without negatively affecting patient care. The study incorporated a derivation sample based on retrospective chart review and a prospective cohort study, and a validation sample based on retrospective chart review. The researchers used the following characteristics to create criteria for selecting patients for whom stool cultures would be indicated: community-acquired diarrhea, age 65 years or older with preexisting comorbid disease, neutropenia, HIV infection, and nondiarrheal manifestations of enteric infections. When the criteria were applied post hoc to a series of 1025 stool cultures the following was determined: The number of stool cultures would have been reduced by 52% and no clinically significant cases would have been missed. Annual savings to a 355-bed institution would be approximately \$7800 for reagent costs and 75 hours of technician time. In the validation samples, only 2 patients of 65 who had infection with EPB would not have been identified, and neither required treatment. If the 3-day rule had been applied, 52 cases would not have been identified, 28 of which required antibiotic treatment. The researchers concluded that their modified 3-day rule for use in selecting cases for stool culture is sensitive to sporadic and epidemic cases of nosocomial diarrhea in hospitalized adults.

Bauer TM, Lakvani A, Fehrenbach J, et al. Derivation and validation of guidelines for stool cultures for enteropathogenic bacteria other than *Clostridium difficile* in hospitalized adults. *JAMA* 2001;285:313-9.

Dr. Slim is Assistant Professor of Medicine, Seton Hall University, South Orange, NJ, and Infectious Disease Specialist, St. Michael's Medical Center, Newark, NJ. Abstracts written by Lamont Williams, Hospital Physician.

Copyright 2001 by Turner White Communications Inc., Wayne, PA. All rights reserved.