

CLINICAL CAPSULES

Surgical Site Infection Risk

Hypertension, obesity, diabetes, and increased ventilator use were significant risk factors for surgical site infections among cardiac surgery patients, Nandan Kumar reported in a poster presented at the annual Interscience Conference on Antimicrobial Agents and Chemotherapy.

In the retrospective study of 199 patients who underwent coronary artery bypass or valve replacement surgery between January 2002 and December 2004, 56 (84%) of the 67 patients with gram-negative surgical site infections (SSIs) had hypertension,

compared with 96 (70%) of 132 uninfected patients in a multivariate analysis.

In addition, 58% of infected patients were obese, defined as having a BMI of at least 30 kg/m², and 55% had diabetes. In contrast, 35% of uninfected patients were obese, and 33% had diabetes. The average length of time on a ventilator was 4 days among infected patients, compared with 2 days among uninfected patients.

The average patient age was 65 years, 68% were men, and 71% were white, wrote Mr. Kumar, of the University of Houston College of Pharmacy, and his col-

leagues. Hospital stays and postoperative stays in the intensive care unit were an average of 6 days and 5 days longer, respectively, for infected patients than for uninfected patients. However, 90-day mortality rates were not significantly affected by gram-negative SSIs, the researchers noted.

Hepatitis B Test Kit Recalled

Ortho-Clinical Diagnostics Inc. and the Food and Drug Administration have issued a class I recall of the VITROS immunodiagnostic HBsAg confirmatory kit because of false-negative results in the confirmation of the presence of hepatitis B surface antigen in human blood and plasma.

An unknown component in the diluting solution that is used to test blood and serum samples may produce "not confirmed" results for samples that are found to be positive with the initial test, resulting in false negatives.

False-negative results may prevent some patients who are infected with or carrying the virus from receiving necessary treatment. The possibility of false-negative results is of particular concern for pregnant women. "When their fetuses are born, they will be presumed negative, and [will not be] treated with the hepatitis B immunoglobulin and hepatitis B vaccine. Such infants have a 90% chance of progressing to chronic hepatitis B virus infection, resulting in possible liver transplantation or early death," according to the FDA.

In mid-December, the company sent letters to medical facilities, testing laboratories, and public health agencies instructing customers to discontinue use of the kits and discard any remaining inventory. Previously reported results should be reviewed. Those with questions should contact Ortho-Clinical Diagnostics' Judy M. Strzepek by calling 908-218-8524.

A class I recall is the most serious type of FDA recall. It involves situations in which there is a reasonable probability that use of the product will cause serious injury or death.

Catheters and Bloodstream Infections

Peripherally inserted central catheters have a lower incidence of infection than do Hickman catheters, but they become infected more quickly, Dr. Alfred E. Bacon III reported in a poster presented at the annual Interscience Conference on Antimicrobial Agents and Chemotherapy.

During a 2-year study conducted by Dr. Bacon and his colleagues at the Christiana Care Health System in Newark, Del., 36 (1.7%) of 2,096 peripherally inserted central catheters (PICCs) in 1,834 patients caused catheter-related bloodstream infections, compared with 43 (9.2%) of 468 Hickman catheters in 383 patients.

A total of 91 pathogens were isolated, including 42 gram-negative rods, 31 gram-positive organisms, 11 yeast, and 7 unknown, unclassified, or miscellaneous pathogens.


Catheter-related bloodstream infections were defined in three ways: positive blood cultures matching the catheter tip culture on removal, multiple positive blood cultures and response to IV antibiotics without another identifiable infection source, and multiple positive blood cultures after line removal in the absence of another identifiable infection source. Catheter care techniques included changing the dressing every 7 days and cleaning and examining the site for infection.

A higher infection rate with Hickman catheters may reflect their use in patients with more complications for longer periods of time, Dr. Bacon and his colleagues wrote. The average time to infection was 82 days for Hickman catheters, compared with 43 days for PICCs. This time frame is typical for PICC use.

The investigators developed an infection control algorithm that included treatment with systemic antibiotics and catheter removal if the catheter was unsalvageable.

—Heidi Splete and Kerri Wachter

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