Medical News

EDITED BY GINA PUGLIESE, RN, MS; MARTIN S. FAVERO, PHD

Additional news item in this issue: *Effects of Silver Device on Peritoneal Dialysis Catheters in Preventing Infection,* page 25.

Risk of *Vibrio vulnificus* Infection From Raw Shellfish Consumption

Raw shellfish-associated *Vibrio vulnificus* septicemia, with a case-fatality rate of nearly 50%, occurs most commonly in immunocompromised patients or those with liver disease. Gholami and coinvestigators from George Washington University, Washington, DC, studied dialysis patients who consumed raw shellfish to determine risk factors associated with infection. Sixty patients with renal disease treated with hemodialysis at George Washington University and awaiting renal transplantation completed an initial survey that assessed their raw shellfish eating habits and their knowledge of *V vulnificus*. Patients were then given educational materials describing the risks of eating raw shellfish and 1 month later completed a second survey that assessed their knowledge retention and intent to eat or not eat raw shellfish in the future.

Sixty of 68 (88%) eligible patients completed the survey. Forty-eight percent of patients reported having eaten raw shellfish after being diagnosed with kidney disease, with the highest rates reported among subjects ≤49 years old and subjects with more than a high school education. Prior to receiving the educational materials, no patient had heard of the pathogen *V vulnificus*. Three quarters of patients reported never having been advised by a physician to avoid eating raw shellfish. One month after reading the educational materials, 75% of patients said they would refrain from eating raw shellfish in the future. The authors concluded that, in view of their immunocompromised status, patients with end-stage renal disease should be counseled to abstain from eating raw shellfish.

FROM: Gholami P, Lew SQ, Klontz KC. Raw shellfish consumption among renal disease patients. A risk factor for severe *Vibrio vulnificus* infection. *Am J Prev Med* 1998;15:243-245.

Risk Factors for Central-Line Infections

Charalambous and coinvestigators from the Manchester University School of Medicine, England, studied the risk factors and clinical impact of central-line infections among patients in the surgical intensive-care unit of a large tertiary-care university hospital. Catheter cultures were obtained from a total of 93 patients during 1996 and 1997, when the patients were clinically infected and the central line was a possible source.

Of 232 consecutive catheters sent for microbiological analysis, 114 (49%) had no growth, 40 (17%) were colonized (<15 colonies), and 78 (34%) were considered infected (≥15 colonies). Univariate analysis showed that site (internal jugular vs subclavian, $P<.001$), catheter use (monitoring>dialysis>fluid>nutrition, $P=.006$), placement in the operating room versus the intensive-care unit ($P=.02$), and placement of a new catheter (>guide wire, >new site, $P=.003$) all were significant factors. Surprisingly, neither the number of lumens nor the duration of the catheter in situ were predictors when a catheter was suspected and not proved infected compared with a suspected and proved catheter infection. In the multiple regression model, the placement of the catheter in the internal jugular position was the single most important predictor of a catheter infection ($P<.001$; odds ratio, 1.83; 95% confidence interval, 1.41-2.37). The presence or absence of a specific clinical sign of infection was not predictive of a proven catheter infection. Eighty-six percent of patients had gram-positive bacteria identified on the culture; 32% of infections were polymicrobial. Of the catheters sent for microbiological analysis, 209 (90%) had concurrent peripheral blood cultures for analysis. Nineteen (32%) with no growth from the catheter and 14 colonized catheters (23%) had concurrent bacteremia; all had another identifiable cause of infection. Twenty-seven infected catheters (45%) had a concurrent bacteremia, and 9 of 27 had a second site positive for the same organism. Death related to the infection occurred in 15 patients, 2 in the first 72 hours and 13 in the following 14 days.

The authors concluded that central-line infections remain an important cause of morbidity and mortality. This study provides additional support for the recommendation in the CDC's 1996 "Guideline for Prevention of Intravascular-Device–Related Infections" that the subclavian, rather than jugular or femoral, sites be used for central venous catheter placement, unless medically contraindicated.

FROM: Charalambous C, Swoboda SM, Dick J, Perl T, Lipsett PA. Risk factors and clinical impact of central line infections in the surgical intensive care unit. *Arch Surg* 1998;133:1241-1246.

Characteristics Associated With Dialyzer Reuse Practices and Mortality

The reuse of hemodialyzers on the same patient has become a standard practice in the United States. More than 80% of licensed dialysis centers reuse the hemodialyzer (which is labeled for one-time use) an average of 15 times.