Medical News

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Risk Factors for Neurosurgical-Site Infections

Researchers from France recently reported the results of a study to determine the incidence and risk factors of surgical-site infections (SSIs) after craniotomy and to test the risk index score proposed by the National Nosocomial Infections Surveillance (NNIS) system. During a 15-month period, every adult patient undergoing craniotomy in 10 neurosurgical units was evaluated prospectively for development and risk factors of SSI. The follow-up period was at least 30 days, and all SSIs were defined according to the NNIS definitions. Incidence was calculated per patient, and multivariate analyses were conducted to include all significant risk factors. The NNIS surgical-wound risk index then was tested in this population.

Out of a total of 2,944 patients, 117 patients (4%) with SSIs were observed, including 30 with wound infections, 14 with bone flap osteitis, 56 with meningitis, and 17 with brain abscesses. Independent risk factors for SSIs were postoperative cerebrospinal fluid leakage and subsequent operation. Independent predictive risk factors were emergency surgery, clean-contaminated and dirty surgery, an operative time longer than 4 hours, and recent neurosurgery. Absence of antibiotic prophylaxis was not found to be a risk factor.

The authors concluded that the NNIS risk index was effective in identifying at-risk patients, and independent risk factors for SSIs after craniotomy involve postoperative events.

FROM: Korinek AM. Risk factors for neurosurgical site infections after craniotomy: a prospective multicenter study of 2,944 patients. The French Study Group of Neurosurgical Infections, the SEHP, and the C-CLIN Paris-Nord. Service Epidemiologie Hygiene et Prevention. *Neurosurgery* 1997;41:1073-1079.

Hepatitis B and Liver Transplantation

Scientists from the University of Virginia Health Sciences Center in Charlottesville and the National Institutes of Health have reported a study to evaluate the risk of acquiring hepatitis B virus (HBV) infection among transplantation recipients of livers from donors without serum hepatitis B surface antigen (HBsAg) but with antibody to hepatitis B core antigen (anti-HBc).

The transplantation experience of four centers between 1989 and 1994 was reviewed. Recipients of livers from 674 donors were evaluated for HBV transmission. HBV developed in 18 of 23 recipients of livers from anti-HBc-positive donors (78%) compared with only 3 of 651 recipients of anti-HBc–negative donor livers (0.5%; $P<.0001$). HbsAg persisted in all recipients with donor-related HBV. Liver histology showed chronic hepatitis of moderate severity in 2 of 13 recipients at 1 year and 5 of 8 recipients between 1.6 and 4.5 years from transplantation. Liver transplantation from an anti-HBc–positive donor was associated with decreased 4-year survival.

The authors concluded that post-transplantation HBV infection occurs at a high rate in recipients of donors with anti-HBc. Transmission of HBV through transplantation suggests that the virus may persist in the liver despite serological resolution of infection.

FROM: Dickson RC, Everhart JE, Lake JR, et al. Gastroenterology transmission of hepatitis B by transplantation of livers from donors positive for antibody to hepatitis B core antigen. *The National Institute of Diabetes and Digestive and Kidney Diseases Liver Transplantation Database* 1997;113:1668-1674.

Cryptosporidiosis and Child-Care Facilities

Investigators from the Hospital Infections Program, CDC, conducted a study on the impact of the 1993 waterborne cryptosporidiosis outbreak on metropolitan Milwaukee child-care homes and child-care centers. Information on outbreak-related illness and changes in policies and practices was collected from directors of 117 facilities. Stool specimens from 129 diapered children from 11 centers were screened for *Cryptosporidium.* Most facility directors (74%) reported children or staff with diarrhea during the outbreak; however, only four facilities (3.4%) closed because of illness among staff or children. During the outbreak, child-care homes were less likely to exclude children with diarrhea than were child-care centers. Among diapered children attending centers, the *Cryptosporidium* prevalence was 30%; 29% of infected children had no history of diarrhea associated with the Milwaukee outbreak.

Facilities continued to operate during the outbreak despite considerable illness among children and staff. The news media were an effective means for providing public health information to child-care facilities. Although secondary transmission undoubtedly took place in child-care facilities, the presence of children with asymptomatic *Cryptosporidium* infections did not result in an increased risk of diarrhea in infant and toddler rooms.

FROM: Cordell RL, Thor PM, Addiss DG, et al. Impact of a massive waterborne cryptosporidiosis outbreak on child care facilities in metropolitan Milwaukee, Wisconsin. *Pediatr Infect Dis J* 1997;16:639-644.

Additional news items in this issue: INH for HIV-Infected Persons With Anergy at Risk for TB, page 16; CJD Update, page 22; Chlamydia and Risk of Coronary Artery Disease, page 27; MDR TB Trends in US, page 37; Costly Consequences of Multiple Misdiagnosis of TB, page 40.

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