

medical-waste management services in the United States. The company's proprietary electro-thermal-deactivation process destroys human pathogens without producing harmful airborne emissions and permits resource recovery. Stericycle operates on a multiregional basis, providing medical-waste collection, transportation, treatment, disposal, reduction, and resource recovery.

FROM: Washington State Department of Health. Press Release: Probable transmission of occupationally acquired tuberculosis at Stericycle Inc, a medical waste processing facility in Morton, WA. Olympia, WA: Washington State Department of Health. March 4, 1998.

Vancomycin-Resistant Enterococci From Community Sources

Researchers from the Erasmus University Medical Center in Rotterdam, The Netherlands, reported the results of a study to determine the prevalence of vancomycin-resistant enterococci (VRE) in The Netherlands. Six hundred twenty-four hospitalized patients from intensive-care units or hemato-oncology wards in nine hospitals and 200 patients living in the community were screened for VRE colonization.

Enterococci were found in 49% of the hospitalized patients and in 80% of the patients living in the community. Of these strains, 43% and 32%, respectively, were *Enterococcus faecium*. VRE were isolated from 12 (2%) of 624 and 4 (2%) of 200 hospitalized patients and patients living in the community, respectively. Polymerase chain reaction (PCR) analysis of these 16 strains and 11 additional clinical VRE isolates from one of the participating hospitals revealed 24 *vanA* gene-containing, 1 *vanB* gene-containing, and 2 *vanC1* gene-containing strains. All strains were cross-resistant to avoparcin but were sensitive to the novel glycopeptide antibiotic LY333328. Genotyping of the strains by arbitrarily primed PCR and pulsed-field gel electrophoresis revealed a high degree of genetic heterogeneity. These findings underscore a lack of hospital-driven endemicity of VRE clones.

The authors believe that this data suggests that the VRE in hospitalized patients have originated from unknown sources in the community.

FROM: Endtz HP, van den Braak N, van Belkum A, Kluytmans JA, Koeleman JG, Spanjaard L, et al. Fecal carriage of vancomycin-resistant enterococci in hospitalized patients and those living in the community in The Netherlands. *J Clin Microbiol* 1997;35:3026-3031.

Influenza Virus A (H5N1) Risk Factors

The Department of Health in Hong Kong and the Centers for Disease Control and Prevention in Atlanta, Georgia, reported the results of a case-control study to determine risk factors associated with recent cases of avian influenza in Hong Kong.

The case-control study was aimed at comparing different exposure risk factors between patients and controls. It covered a number of areas including live-poultry exposure,

exposure when preparing food, food eaten during the week before onset, and human-illness exposure during the week before onset. The results indicated that visiting a poultry stall in the week before becoming ill was the strongest risk factor. These results support earlier findings that human-to-human transmission of the virus is inefficient.

A total of 18 cases of influenza A(H5N1) was reported in Hong Kong. The day of onset of illness of the last case was December 28, 1998. A 24-year-old female patient is still under treatment and in stable condition, while 11 others have been discharged after recovery. Six people died of the disease.

FROM: Chin J (World Health Organization). Influenza virus A (H5N1) risk factors. ProMED-e-mail post; March 12, 1998.

Hospital Epidemic of *Malassezia pachydermatis*

Investigators from CDC's Hospital Infections Program recently reported an unusual outbreak involving the yeast *Malassezia pachydermatis*. *Malassezia* species are lipophilic yeasts that are emerging as nosocomial pathogens, particularly in low-birth-weight neonates who receive lipid emulsions.

A cluster of patients with *M pachydermatis* infection was identified in an intensive-care nursery, and an investigation was initiated. A case patient was defined as any infant in the intensive-care nursery who had a positive culture for *M pachydermatis* between October 17, 1993, and January 18, 1995. A cohort study was conducted to identify risk factors for colonization and infection with *M pachydermatis*. Cultures were collected from the infants and the healthcare workers and from the healthcare workers' pets, because this organism has been associated with otitis external in dogs.

Fifteen infants met the case definition: eight with bloodstream infections, two with urinary tract infections, one with meningitis, and four with asymptomatic colonization. The case patients were significantly more likely than the other infants to weigh 1,300 g or less (15/65 vs 0/419; $P<.001$). In a multivariate analysis of infants weighing 1,300 g or less, the independent risk factors for colonization or infection with *M pachydermatis* were a greater severity of concomitant illness, arterial catheterization for 9 or more days, and exposure to nurse A.

In a point-prevalence survey, 9 additional infants, 1 healthcare worker, and 12 of the healthcare workers' pet dogs had positive cultures for *M pachydermatis*. The isolates from all 15 case patients, the 9 additional colonized infants, 1 healthcare worker, and 3 of the 12 dogs had identical patterns of restriction fragment-length polymorphisms.

It was concluded that it is likely that *M pachydermatis* was introduced into the intensive-care nursery on healthcare workers' hands after being colonized from pet dogs at home. The organism persisted in the nursery through patient-to-patient transmission.

FROM: Chang HJ, Miller HL, Watkins N, Arduino MJ, Ashford DA, Midgley G, et al. An epidemic of *Malassezia*

pachydermatis in an intensive care nursery associated with colonization of health care workers' pet dogs. *N Engl J Med* 1998;338:706-711.

***Clostridium difficile* on a Surgical Service**

A study to evaluate the epidemiology of *Clostridium difficile* colitis in a subset of patients admitted specifically to a surgical service was conducted by investigators from Beth Israel Deaconess Medical Center and Harvard Medical School in Boston, Massachusetts. *C difficile* colitis is an increasingly prevalent nosocomial infection that can prolong hospitalization and affect patient outcome adversely. Although this disease has been investigated extensively in patients admitted to medical services, the incidence and risk factors for the development of this disease in patients admitted to a surgical service have not been studied.

Over a 5-month period, 21 (5.6%) of 374 patients admitted to the general, vascular, thoracic, and urologic surgery services developed symptomatic *C difficile* colitis (defined as more than three bowel movements per 24 hours and a positive cytotoxin assay or culture). Factors that independently predisposed to infection included admission from a skilled-care facility, use of the antibiotic cefoxitin, and an operative procedure for bowel obstruction. Other factors associated with *C difficile* colitis included colectomy, treatment with any antibiotic, nasogastric tube suction, advanced age, and prior antibiotic treatment. Abdominal pain and fever also were more common in patients with *C difficile* colitis. Morbidity included prolonged hospitalization in all patients and urgent colectomy in one.

It was concluded that *C difficile* colitis frequently affects surgical patients, producing morbidity ranging from mild diarrhea to life-threatening illness. A variety of factors, many of which are associated with intestinal stasis, predispose to the development of *C difficile* colitis.

FROM: Kent KC, Rubin MS, Wroblewski L, Hanff PA, Silen W. The impact of *Clostridium difficile* on a surgical service: a prospective study of 374 patients. *Ann Surg* 1998;227:296-301.

Risk of *Helicobacter pylori* Transmission by Upper Gastrointestinal Endoscopy

Upper gastrointestinal endoscopy has been reported as a risk factor for the transmission of *Helicobacter pylori*. Investigators from San Paulo, Brazil, conducted a study to evaluate the possibility of transmission of *H pylori* infection by upper gastrointestinal endoscopy.

The study included 1,082 patients. Patients who had undergone upper gastrointestinal endoscopy or were treated with antibiotics 15 days before the index endoscopy were excluded. *H pylori* infection was diagnosed by ultra-rapid urease test. Variables analyzed were age, gender, type of dyspepsia (organic or functional), and the number of previous upper gastrointestinal endoscopies.

Patients ranged in age from 13 to 94 years (mean, 45.8; standard deviation [SD], 15.7), and the number of previous upper gastrointestinal endoscopies ranged from 0 to 20 (mean, 1.5; SD, 2.4). The overall prevalence of *H pylori* infection was 60%. There was no statistically significant difference in the mean number of upper gastrointestinal endoscopies in patients with and without *H pylori* infection.

The authors concluded that there was no association between history of upper gastrointestinal endoscopy and current *H pylori* infection in this study population.

FROM: Rohr MR, Castro R, Morais M, Brant CQ, Castelo Filho A, Ferrari AP Jr. Risk of *Helicobacter pylori* transmission by upper gastrointestinal endoscopy. *Am J Infect Control* 1998;26:12-15.

Additional news item in this issue: Community-Acquired Methicillin-Resistant Staphylococcus aureus, 322.

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