Medical News

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HCV Transmission Associated With Colonoscopy

French investigators have reported the transmission of hepatitis C virus (HCV) from an infected patient to two other patients by means of a colonoscope. All three patients underwent colonoscopy on the same day with the same colonoscope. Patients 1 and 2 developed a hepatitis-like illness 3 months after undergoing a colonoscopy, and both tested positive for HCV antibodies by third-generation assays.

Because of the temporal relation between HCV positivity and colonoscopy, nosocomial transmission was suspected. An investigation revealed that a patient known to have HCV infection (patient 3) underwent colonoscopy at 10:10 AM, followed by patient 2 at 11:00 AM, and patient 1 at 12:00 PM. Neither patient 1 nor 2 had known risk factors for HCV. All three patients were infected with HCV genotype 1b, and nucleotide sequencing of the NS3 region showed that all three patients were infected with the same isolate. In addition, the level of viremia in patient 3, 1 month after the colonoscopy, was 3.5 million genome equivalents per milliliter.

The colonoscope used on all three patients was processed between patients by immersion in water containing detergent and washed on the outside with disposable swabs. The air, water, and biopsy-suction channels were washed with the same detergent as the colonoscope with an all-channel irrigator. After being rinsed with water, the colonoscope and all internal channels were soaked 5 minutes in 2% glutaraldehyde, followed by rinsing and drying with compressed air. During the procedures, the biopsy-suction channel never was cleaned thoroughly with an appropriate brush. After each procedure, the biopsy forceps and the diathermic loop were cleaned mechanically in detergent and glutaraldehyde, but never were sterilized.

The investigators concluded inadequate cleaning caused the disinfection procedure to fail, and they recommended strict adherence to endoscope cleaning and disinfection guidelines published by the American Society for Gastrointestinal Endoscopy and the British Society of Gastroenterology.

FROM: Bronowicki JP, Botte C, Monhoven N, et al. Patient-to-patient transmission of hepatitis C virus during colonoscopy. *N Engl J Med* 1997;337:237-240.

US Isolate of *Staphylococcus aureus* With Reduced Susceptibility to Vancomycin

In 1996, the first documented case of infection caused by a strain of *Staphylococcus aureus* with intermediate levels of resistance to vancomycin, referred to by the CDC as VISA (minimum inhibitory concentration [MIC]=8 μg/mL), was reported from Japan.[1] In July 1997, VISA-associated peritonitis was diagnosed in a patient in Michigan who was being treated with long-term ambulatory peritoneal dialysis.[2] During January 1996 to June 1997, the patient had been treated with multiple courses of both intraperitoneal and intravenous vancomycin for repeated episodes of methicillin-resistant *S aureus*-associated peritonitis.

Six isolates of *S aureus,* obtained from one specimen from this patient in July, were sent to the CDC for species confirmation and antimicrobial susceptibility testing. The identity was confirmed, and one of the six demonstrated a vancomycin MIC of 8 μg/mL. The VISA isolate was susceptible to rifampin, chloramphenicol, trimethoprim-sulfamethoxazole, and tetracycline. Epidemiological and laboratory investigations are underway to assess the risk for person-to-person transmission and to determine the mechanism(s) by which these strains develop resistance.

This report documents the emergence of VISA in the United States and may signal the eventual emergence of *S aureus* strains with full resistance to vancomycin. Widespread use of antimicrobials, such as vancomycin, is a major contributing factor for the emergence of vancomycin-resistant organisms, including vancomycin-resistant enterococci.

To prevent the spread of these organisms within and between facilities, the CDC has advised healthcare providers and facilities (1) to ensure the appropriate use of vancomycin; (2) to educate those personnel who provide direct patient care about the epidemiological implications of such strains and the infection control precautions necessary for containment; (3) to adhere strictly to, and monitor compliance with, contact isolation precautions and other recommended infection control practices; and (4) to conduct surveillance to monitor the emergence of resistant strains. Detailed recommendations are outlined in "Interim Guidelines for Prevention and Control of Staphylococcal Infections Associated with Reduced Susceptibility to Vancomycin," published in the July 11, 1997, issue of the *Morbidity and Mortality Weekly Report.*[3]

[At press, another VISA isolate has been reported by the CDC. In August 1997, a VISA-associated bloodstream infection was diagnosed in a New Jersey resident with long-term MRSA colonization and repeated MRSA infections since February. The patient was not receiving chronic dialysis. In addition, since February, the patient has had vancomycin-resistant enterococcal colonization. During March through August, the patient had been treated with multiple courses of vancomycin for repeated MRSA bloodstream infections. In August, a blood culture from the patient grew an MRSA strain with intermediate resistance

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