

Medical News

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New Anaerobic Identification System Evaluated

Microbiologists at the Hospital Infections Program at the CDC tested the BBL Crystal Anaerobe identification system against 322 clinically significant anaerobic bacteria. The system correctly identified 286 (88.8%) of the anaerobic bacteria. Of these, 263 (82%) were identified correctly on initial testing, 49 (15%) were identified correctly only to the genus level, and 10 (3%) were not identified; on repeat testing, 23 (47%) of 49 were identified correctly to both the genus and the species levels. Performance characteristics for individual strains varied. The system correctly identified all tested strains of *Campylobacter*, *Desulfomonas*, *Desulfovibrio*, *Leptotrichia*, *Mobiluncus*, *Peptostreptococcus*, *Porphyromonas*, *Provetella*, *Propionibacterium*, *Tisierella*, and *Veillonella*; 36 (97%) of 37 *Actinomyces* strains, 42 (91%) of 46 *Bacteroides fragilis* group strains, 8 (53%) of 15 *Bacteroides* strains, and 79 (76.7%) of 103 *Clostridium* strains; but failed to identify any of the 7 *Clostridium innocuum* and 9 *Clostridium tetani* strains tested.

This system was found to be easy to use, did not involve the addition of reagents, and was faster than conventional anaerobic procedures. It was concluded that it would be a useful addition to the anaerobe laboratory of most hospitals.

FROM: Cavallaro JJ, Wiggs LS, Miller JM. Evaluation of the BBL crystal anaerobe identification system. *J Clin Microbiol* 1997;35:3186-3191.

New Strain of Influenza Type A in Hong Kong

A strain of influenza virus that previously was known to infect only birds has been associated with infection and illness in humans in Hong Kong. The first known case of influenza type A (H5N1) occurred in a 3-year-old child who died from respiratory failure in May 1997. Since this initial case was identified, seven confirmed cases and two possible cases have been identified in Hong Kong. Three of the cases had contact with each other, as well as with common exposures.

These cases represent the first documented human infections with avian influenza A (H5N1) virus. One of the most important aspects of the ongoing investigation is to determine the source of the infection and mode of transmission. However, this effort is complicated by the high prevalence of exposure to live poultry among residents of Hong Kong.

Although the spectrum of illness caused by human influenza virus infection can range from asymptomatic to fatal, most human influenza infections cause acute febrile respiratory illnesses that resolve without complications.

Many of the cases of human infection with type A (H5N1) identified so far in Hong Kong have been unusually severe.

Infection with this influenza strain, which is new to humans, prompts consideration about whether this virus has the potential to spread globally and cause a pandemic. For an influenza pandemic to occur, a novel human influenza strain, against which all or most of the human population has no antibody, must be capable of sustained person-to-person transmission, causing widespread illness. As of December 17, 1997, acute respiratory illness among the population of Hong Kong apparently has not increased.

Although the potential for widespread transmission of this strain is presently unknown, as a precautionary measure, laboratory studies have been initiated to identify a candidate A (H5N1) vaccine strain. At this time, there are no plans for commercial vaccine production. The influenza A (H5N1) isolates from Hong Kong that have been tested are sensitive to amantadine and rimantadine. The World Health Organization does not recommend any restrictions of travel to Hong Kong or elsewhere.

FROM: Reeves K, World Health Organization. A new case of influenza A (H5N1) was confirmed. December 19, 1997; ProMED Internet mail post.

RAPD: A New Analytical Tool for MRSA

Scientists at Guy's and St. Thomas's Hospitals, London, reported a cluster of methicillin-resistant *Staphylococcus aureus* (MRSA) infections among patients on an intensive-care unit (ICU) that was detected by routine infection control surveillance. From January 5 to June 22, 1995, 10 patients on the ICU and a further 6 patients (5 on a ward that had received colonized patients transferred from the ICU) were affected by MRSA strains with the same antibiotic susceptibility patterns. Seven (44%) of these 16 colonized patients developed MRSA bacteremia. MRSA isolates with the same characteristics also were found on the hands of one member of the ICU staff. The isolates were untypeable by phage typing, but 15 of 17 outbreak strains analyzed genetically had identical randomly amplified polymorphic DNA (RAPD) and pulsed-field gel electrophoresis (PFGE) profiles.

A single strain of MRSA, nontypeable by phage typing and isolated on the ICU on January 1, and six nontypeable and epidemiologically unrelated MRSA isolates all had RAPD profiles distinct from that of the outbreak strain. Implementation of strict infection control measures stopped the further spread of MRSA on the ICU, the affected general ward, and seven other wards that received MRSA carriers from the ICU. Although nontypeable by phage typing and not previously recognized as an epidemic strain, this strain of MRSA was readily transmissible and