disease prevention news

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Risk of Exposure to Meningococcal Disease in the Laboratory

Laboratory-acquired meningococcal disease is a substantial occupational hazard for microbiologists. In the February 22, 2002, issue of MMWR, the Centers for Disease Control and Prevention reported 16 cases of Neisseria meningitidis *infection in laboratory workers over a 15-year period. This article describes the precautionary measures necessary to prevent laboratory exposure to* N. meningitidis.

The 16 reported cases represent an attack rate of 13 per 100,000 population (95% confidence interval [CI]= 5—29). This rate compares to the national rate (approximately 0.2 per 100,000) for community-acquired meningitis among adults aged 30 through 59. The case-fatality rate, however, is 50% for laboratory-acquired meningitis, which is substantially higher than that for community-acquired disease (5%-15%).

In most humans, *N. meningitidis* colonizes the oropharynx or nasopharynx, primarily as a saprophyte, and occasionally will cause oropharyngitis. Dissemination from the oropharynx occurs rarely and may result in meningococcemia with or without meningitis. In addition to the vascular system, organs that may be affected are skin, joints, pericardium, heart, and eyes. Acute onset of headache, sore throat, generalized malaise, fever, diffuse myalgias, and vomiting may be present in the early stages of the disease. Petechia or purpuric lesions are common and usually appear 12 to 36 hours after the onset of disease. Treatment of suspected meningococcal disease should begin as soon as appropriate culture specimens have been obtained.

In the microbiology laboratory, care should be taken whenever droplet formation or aerosolization is possible (subculturing blood cultures, gram stain preparations, plating, subculturing, and serogrouping). It is **highly recommended** that all work manipulations be done in a biological safety cabinet (BSC) and that personnel at risk for exposure, especially those who perform testing on isolates of this organism, receive the quadrivalent meningococcal polysaccharide vaccination for *N. meningitidis* types A,C,Y and W-135 (**Note**: Because the vaccine does NOT cover all strains of *N. meningitidis*, precautions **MUST** be maintained in handling specimens). Laboratory scientists and microbiologists with known mucosal exposure of invasive *N. meningitidis* should receive antimicrobial chemoprophylaxis; anyone percutaneously exposed to an invasive *N. meningitidis* isolate from a normally sterile site should receive treatment with penicillin.

Any laboratory that routinely serotypes *N. meningitidis* is strongly urged to use appropriate precautions to avoid aerosols and to use personal protective measures that prevent contamination. Whenever broth suspensions suspected of containing *N. meningitidis* are handled, gloves and masks should be used.

Submit all isolates to the Texas Department of Health (TDH) in a timely manner. If your laboratory does not serotype this organism, typing will be performed at the TDH Bureau of Laboratories. Please package the isolate securely and submit it according to infectious goods guidelines; include a completed G-1 form. Microbiologists in the TDH Clinical Bacteriology Section are available at 512/458-7582 to assist with technical questions regarding isolation, identification, and serotyping of *N. meningitidis* isolates. Isolates of *N. meningitidis* Group C are routinely tested using pulse field gel electrophoresis analysis. A TDH database is used to track suspected outbreaks. Isolates should be submitted on a chocolate or blood agar slant and shipped to the following address:

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Also in this issue:

Bronchoscope Recall Efforts Increased
International Alert on OB/GYN Surgical Devices
Attention Local and Regional Health Offices!

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Call 512/458-7582 prior to shipment.

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Additional information is available at these Web sites:
www.tdh.state.tx.us/phpep/dpn/issues/dpn61n03.pdf
www.cdc.gov/mmwr/preview/mmwrhtml/mm5107a1.htm

Olympus America Steps Up Efforts to Increase Response to September 2001 Recall of Potentially Defective Bronchoscopes

A Tennessee Department of Health investigation last fall implicated defective brochoscopes manufactured by Olympus America with an unusually high rate of *Pseudomonas* infections in that state. As a result of the Tennessee Department of Health report to the Centers for Disease Control and Prevention, Olympus issued a voluntary recall notice on November 30, 2001. Subsequent to this recall, Johns Hopkins Hospital began an ongoing investigation into higher than expected *Pseudomonas* infections at that facility and raised questions regarding the effectiveness of the recall notification.

Pseudomonas bacteria are known for their ability to cause disease in humans, animals, and plants. They occur naturally in soil and water, and also live on the surfaces of plants and animals, including humans. One type of the bacteria, called *Pseudomonas aeruginosa,* is often found in humans but does not cause illness unless a person is already sick or has a weakened immune system. It can cause infections of the urinary tract, blood, lungs and airways, and any tissue that is already injured or compromised. *P. aeruginosa* infection can also cause inflammation of the skin. Although *Pseudomonas* infections can be resistant to most commonly used antibiotics, there still remain effective antibiotic therapies for most strains.

In response, Olympus America issued a second urgent recall notice on February 27, 2002, and has taken aggressive action to increase the response rate of medical facilities known to have received any of the recalled bronchoscopes.

The following models of the Olympus America brochoscope were recalled: BF-40, BF-P40, BF-IT40, BF-3C40, BF-XP40, BF-XT40, BF-240, BF-P240, BF-IT240, BF-6C240, BF-160, BF-P160, BF-IT160, BF-3C160, and BF-XT160. **Olympus strongly urges ALL health facilities in possession of ANY of these models to**

- **immediately** remove them from service AND
- return them by Federal Express to this address:
  Olympus National Service Center
  Attn: Bronchoscope Modification
  2400 Ringwood Avenue
  San Jose, CA 95131-1700

As part of their investigation, pulmonologists and infection control experts at Johns Hopkins Hospital reviewed the medical records of all patients known to have undergone bronchoalveolar lavage at the hospital during the period of June 1, 2001, through February 4, 2002. Around 100 of the 410 patients in the group tested positive for exposure to *Pseudomonas*

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aeruginosa; this incidence rate is 2 to 3 times what would be expected in this population.

Johns Hopkins has initiated an aggressive campaign to contact the 410 patients involved in this investigation. The patients, all adults, are being offered free evaluation and testing. They and their physicians are being asked to be especially alert to symptoms of infection such as fever, coughing, increased phlegm, or increased shortness of breath. Hopkins physicians are also trying to heighten awareness among their colleagues nationwide of this problem and of more aggressive measures that need to be taken to confirm the source of infection.

As of March 18, 2002, ongoing epidemiologic investigations have not been conclusive as to the exact cause/s of the higher than expected incidences of *Pseudomonas* infections in medical facilities that used the recalled bronchoscopes. Therefore, the Food and Drug Administration (FDA) continues to collect data from these investigations. It also encourages medical facilities that use bronchoscopes and endoscopic washers to ensure that staff are adequately trained to use these medical devices properly. In 1999, a joint effort on the part of FDA and CDC to address this issue resulted in guidelines available online at www.fda.gov/cdrh/index.html; click on "TOPIC INDEX," then "E," then "endoscopy."

For additional information about this recall, contact Wally Pellerite, FDA Assistant Director of Compliance at 301/594-4692 x 159 or Laura Storms-Tyler of Olympus America at 631/844-5688.

International Alert on OB/GYN Surgical Devices

On March 14, 2002, the US Food and Drug Administration issued an international alert to consumers and health professionals about medical devices manufactured by an Alpharetta, GA, company that does business as A&A Medical/Rocket USA DBA Life Quest, and also as simply A&A. Some of the products manufactured by this company have been labeled and shipped internationally as sterile but in fact may not have undergone any sterilization process. These mislabeled products can potentially cause death or serious injury such as infection, infertility, and miscarriage. This problem potentially affects products distributed since 1999.

This firm manufactures many types of medical devices that are used only in a clinical setting during surgical and gynecological procedures. These products include, but are not limited to, curettes (flexible and rigid), uterine dilators such as laminaria, endometrial sampling sets, fetal blood samplers, fetal bladder drains, laparoscopy accessories, bone marrow needles, harvesting pumps used for in-vitro fertilization, and aspiration sets.

FDA is urging the company to recall these products and will take the appropriate measures to insure their removal as soon as possible. Distributors and health care providers who have received these products should cease their distribution and use immediately.

Additional information is available from A&A at 800/424-1234 or from the FDA Center for Devices and Radiological Health in Rockville, MD, at 800/638-2041.

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www.tdh.state.tx.us/phpep/

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Attention Local and Regional Public Health Offices: Disease Prevention News Needs Your Help!

The Texas Department of Health publishes *Disease Prevention News* (DPN) every two weeks to keep physicians, nurses, laboratorians, and many other types of health professionals informed of public health events that impact the residents of this state. As of September 2001, the Public Health Professional Education Program (PHPE), which includes DPN, became part of the newly established Office of Public Health Practice (OPHP). Since its inception in the early 1900s, one of the fundamental DPN goals has been to meet the current OPHP mission:

> "...to serve the needs of local public health agencies, TDH Public Health Regions, and local communities in building and maintaining capacity to provide essential public health services responsive to local needs."

With the enhanced support OPHP provides, DPN is stepping up its ongoing efforts to provide a stronger voice for local health departments. Most local efforts have relevance to other areas of Texas as well. For instance, an outbreak in Lubbock might be a harbinger of similar outbreaks statewide. A creative, successful local intervention that, for example, improves disease surveillance or develops a public health communications network can provide a model for other regional health departments.

Our goal is to have a contact person in each PHR office who will keep DPN informed of local public health activities and needs.

Call in or e-mail your suggestions to the editor right away!
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