CDC CLINICAL REMINDER

Spinal Injection Procedures Performed without a Facemask Pose Risk for Bacterial Meningitis

Summary:

The Centers for Disease Control and Prevention (CDC) is concerned about the occurrence of bacterial meningitis among patients undergoing spinal injection procedures that require injection of material or insertion of a catheter into epidural or subdural spaces (e.g., myelogram, administration of spinal or epidural anesthesia, or intrathecal chemotherapy). Outbreaks of bacterial meningitis following these spinal injection procedures continue to be identified among patients whose procedures were performed by a healthcare provider who did not wear a facemask (e.g., may be labeled as surgical, medical procedure, or isolation mask),[1] with the most recent occurrence in October 2010 (CDC unpublished data). This notice serves as a reminder that facemasks should always be worn by healthcare providers when performing these spinal injection procedures.[2]

Background:

CDC has investigated multiple outbreaks of bacterial meningitis among patients undergoing spinal injection procedures. Recent outbreaks have occurred among patients in acute care hospitals who received spinal anesthesia or epidural anesthesia, and also among patients at an outpatient imaging facility who underwent myelography.

In each of these outbreak investigations, nearly all spinal injection procedures that resulted in infection were performed by a common healthcare provider who did not wear a facemask. The strain of bacteria isolated from the cerebrospinal fluid of these patients was identical to the strain recovered from the oral flora of the healthcare provider who performed the spinal injection procedure. These findings illustrate the risk of bacterial meningitis associated with droplet transmission of the oral flora from healthcare providers to patients during spinal injection procedures.

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion

Since facemasks have been shown to limit spread of droplets arising from the oral flora,[3] the CDC has recommended their use by healthcare providers when performing spinal injection procedures.[2]

In addition to wearing a facemask, healthcare providers should ensure adherence to all CDC recommended safe injection practices including using a single-dose vial of medication for only one patient.[2]

Recommendations:

Anyone performing a spinal injection procedure should review the following CDC recommendations to ensure that they are not placing their patients at risk for infections such as bacterial meningitis.

- Facemasks should always be used when injecting material or inserting a catheter into the epidural or subdural space.[2]

- Aseptic technique and other safe injection practices (e.g., using a single-dose vial of medication or contrast solution for only one patient) should always be followed for all spinal injection procedures.[2]

These recommendations apply not only in acute care settings such as hospitals, but in any setting where spinal injection procedures are performed, such as outpatient imaging facilities, ambulatory surgery centers, and pain management clinics.

Additional information is available at:

http://www.cdc.gov/hicpac/2007IP/2007ip_part3.html

References:

1. Centers for Disease Control and Prevention. Bacterial meningitis after intrapartum spinal anesthesia - New York and Ohio, 2008-2009. *MMWR Morb Mortal Wkly Rep.* 2010;59(3):65-9.

2. Centers for Disease Control and Prevention. 2007 Guideline for isolation precautions: preventing transmission of infectious agents in healthcare settings. Available at: http://www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pdf. Accessed January 25, 2011.

3. Philips BJ, Fergusson S, Armstrong P, Anderson FM, Wildsmith JA. Surgical face masks are effective in reducing bacterial contamination caused by dispersal from the upper airway. *Br J Anaesth*. 1992;69(4):407-8.