

# Fungal Meningitis Cases Resulting From Potentially Contaminated Steroid Injections

## Target audience: Clinical laboratories

Friday, October 5, 2012

### Background:

A nationwide investigation of meningitis among patients who had received an epidural steroid injection since July 1, 2012 is ongoing. As of October 4, 2012, a total of 35 cases including five deaths have been reported in six states. Fungus has been identified in specimens obtained from five patients. Fungal meningitis is not transmitted person-to-person. There have been six confirmed cases in Michigan to date.

A potentially contaminated product is suspected to be the cause of the outbreak. Interim data show that all infected patients received injection with preservative-free methylprednisolone acetate (80mg/ml) prepared by New England Compounding Center (NECC), located in Framingham, MA. Three lots of medication used on infected patients have been recalled:

- Methylprednisolone Acetate (PF) 80 mg/ml Injection, Lot #05212012@68, BUD 11/17/2012
- Methylprednisolone Acetate (PF) 80 mg/ml Injection, Lot #06292012@26, BUD 12/26/2012
- Methylprednisolone Acetate (PF) 80 mg/ml Injection, Lot #08102012@51, BUD 2/6/2013

Four Michigan facilities received medication from the recalled lots, and are notifying patients who may be at risk. The facilities are Michigan Neurosurgical Institutes in Grand Blanc; Michigan Pain Specialists in Brighton; Neuromuscular and Rehabilitation in Traverse City; and Southeast Michigan Surgical Hospital in Warren.

Infected patients have presented approximately 1 to 4 weeks following their injection with a variety of symptoms, including fever, new or worsening headache, nausea, and new neurological deficit (consistent with deep brain stroke). Some of these patients' symptoms were very mild in nature. CSF obtained from these patients has typically shown elevated white cell count (with a predominance of neutrophils), low glucose, and elevated protein.

Patients who received epidural injection and have symptoms of meningitis or basilar stroke, should have a diagnostic lumbar puncture (LP) performed, unless contraindicated. Because presenting symptoms in this cluster have been mild and not classic for meningitis (e.g., new or worsening headache without fever or neck stiffness), physicians should have a low threshold for performing an LP.

For more information on the outbreak including treatment guidance please see

<http://www.cdc.gov/hai/outbreaks/meningitis.html>

## Steps for laboratories to take now:

- Report all suspect cases of meningitis in the Michigan Disease Surveillance System (MDSS), including any patients who undergo lumbar puncture as a result of this investigation. Cases should be entered into the MDSS as "Meningitis, Aseptic", with the outbreak identifier "NECC".
- In addition to routine gram stain and bacterial cultures (including aerobic and anaerobic), fungal and AFB smears and cultures should be obtained. Hold all cultures for at least 2-3 weeks prior to discarding.
- Specifically for the work-up of possible fungal pathogens:
  - If patients have intraventricular shunts/drains, obtain large volume of CSF to culture for fungi from this source
  - Send CSF sample for *Aspergillus* galactomannan assay (Contact MDCH laboratory if you cannot find a testing facility)
  - Send serum sample for *Aspergillus* galactomannan assay (Contact MDCH laboratory if you cannot find a testing facility)
- Notify MDCH (see below) of *Aspergillus fumigatus* (or any fungus/mould) recovered from CSF or any sterile site (including joint fluid).
- Save isolates for possible submission to MDCH laboratory in Lansing.
- Save any remaining CSF (or other sterile site specimen) for further testing.

## Questions and Additional Information

For laboratory related questions, please contact  
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If you have questions regarding this outbreak or the information requested, please contact  
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Thank you for your assistance in this investigation.