

For Health Professionals

Health Alerts

Health Update #145 - Low Levels Tularemia Detected - October 3, 2005

Presence of low levels of *Francisella tularensis* in the Washington D.C. area, September 30, 2005

CDC has become aware that from September 24th through September 25th environmental air monitors in SW Washington D.C., more specifically the Capitol Mall area, signaled the low level presence of *Francisella tularensis*, the bacterium that causes Tularemia, also known as "rabbit fever."

At this time, public health agencies have no reports of any related human or animal illnesses.

This announcement is a precautionary measure to assure that clinicians are aware of the situation and are able to recognize, test, and report any suspected cases to the appropriate medical and public health authorities.

This is a national alert because the Capitol Mall area is a highly-trafficked tourist destination, and on Saturday, September 24th, was the site of several very well attended outdoor events.

Clinical Presentations

The clinical presentations most likely to occur after an aerosol exposure to *F. tularensis* are pneumonic, oculoglandular and oropharyngeal. The usual incubation period is 3-5 days, but in rare instances can be longer. The disease is not communicable from person to person and can be effectively treated with readily available antimicrobials.

Preliminary Case Definition

Onset from Monday September 26 through October 5 of an acute febrile illness associated with at least one of the following:

- Conjunctivitis with preauricular lymphadenopathy (oculoglandular)
- Stomatitis or pharyngitis or tonsillitis and cervical lymphadenopathy (oropharyngeal)
- Cough, shortness of breath, pleuritic chest pain (pneumonic), Which is not otherwise explained in a resident or visitor to the National Capitol Region on Saturday or Sunday, September 24-25.

Human Diagnostic Specimens

Clinical specimens may include:

- Bronchial/tracheal washes or aspirates, sputum, trans-thoracic lung aspirates, or pleural fluid collection

- Swabs of visible lesions or affected areas (e.g., conjunctiva or pharynx)
- Aspirates from lymph nodes
- Whole blood or blood cultures are acceptable specimens, but are generally positive in cases of severe illness only.

Laboratory Testing (Culture)

Microbiology laboratory personnel should be alerted when *F. tularensis* is clinically suspected, so that appropriate laboratory precautions can be taken. *F. tularensis* is a fastidious, slow-growing organism that requires cysteine for growth. *F. tularensis* may be cultured on the following:

- Cysteine supplemented agar including chocolate agar (CA)
- Cysteine heart agar with 9% chocolitized blood (CHAB)
- Buffered charcoal yeast extract (BYCE)
- Thayer-Martin agar Culture plates should be held for 5-7 days at 35-37°C (CO₂ is acceptable) and checked for growth daily.

F. tularensis can be isolated from nutrient enriched specimens (tissues) on sheep blood agar (SBA), but the organism will usually fail to thrive with passage on SBA. Growth on CHAB provides for presumptive identification of *F. tularensis* as the organism shows characteristic growth on this media (green, opalescent, raised, shiny colonies at 24-48 hours).

Note: Specimens for recovery of live bacteria, should be collected before antibiotics are administered

Prophylaxis

CDC does not recommend mass or targeted prophylaxis at this time because:

- The usual incubation period has passed without an increase in suspicious illnesses in the area, and air sampling since September 25th has been negative
- Infection is readily treatable and generally has a low mortality rate with medical care
- Infection cannot be transmitted to others

Treatment

Adults

Preferred choices:

- Streptomycin, 1g IM twice daily
- Gentamicin, 5 mg/kg IM or IV once daily †

Alternative choices:

- Doxycycline, 100 mg IV twice daily
Ciprofloxacin, 400 mg IV twice daily †

Children

Preferred choices:

- Streptomycin, 15 mg/kg IM twice daily (should not exceed 2 gm/d)
Gentamicin, 2.5 mg/kg IM or IV 3 times daily †

Alternative choices:

- Doxycycline,
 - If weight \geq 45 kg, 100 mg IV
 - If weight < 45 kg, give 2.2 mg/kg IV twice daily
- Ciprofloxacin, 15 mg/kg IV twice daily ‡

Pregnant Women

Preferred choices:

- Gentamicin, 5 mg/kg IM or IV once daily †
Streptomycin, 1 g IM twice daily

Alternative choices:

- Doxycycline, 100 mg IV twice daily
Ciprofloxacin, 400 mg IV twice daily †

One antibiotic, appropriate for treatment for patient age, should be chosen from among the alternatives. Treatment with streptomycin, gentamicin, or ciprofloxacin should be continued for 10 days; treatment with doxycycline should be continued for 14-21 days.

Persons beginning treatment with intramuscular (IM) or intravenous (IV) doxycycline, ciprofloxacin can switch to oral antibiotic administration when clinically indicated.

† Not a U.S. Food and Drug Administration-approved use.

‡ Ciprofloxacin dosage should not exceed 1 g/d in children.

Additional information about Tularemia can be found on the CDC website:

<http://www.bt.cdc.gov/agent/tularemia/>