This information is current as of the date faxed and for the patient specified ONLY. Do not use this information for other patients without contacting the Poison Center at 1-800-222-1222.

Q FEVER: Health Care Information

Q (query) fever is a worldwide zoonosis caused by *Coxiella burnetii.* Common animal reservoirs are domesticated ruminants such as cattle, sheep and goats. Humans usually acquire Q fever by inhaling aerosols or contaminated dusts derived from infected animals or animal products. Although easily aerosolized and highly infectious (infective dose is 1 to 10 organisms), Q fever is classified as a category B bioterrorism agent since it lacks the capacity to cause mass fatalities.

Signs and Symptoms: Immediately after an airborne release, patients will have no symptoms, but may require antibiotic prophylaxis and decontamination (see below).

After an incubation period of ~15 days (range 10 to 40), a flu-like illness with abrupt onset of **high fever, diaphoresis, headache, myalgias, cough and pleuritic chest pain** may occur. Other presentations include atypical pneumonia and hepatitis and, less commonly, pericarditis, myocarditis and meningoencephalitis. The flu-like syndrome may last 1 to 3 weeks. Common laboratory findings include lymphopenia (although leukocyte count is usually normal), thrombocytopenia (in 25%) and transaminitis (in 85%). Common abnormalities on chest radiography are segmental or lobar opacities. Multiple rounded opacities are a hallmark of Q fever pneumonia, but are not always present.

Chronic Q fever is defined as infection lasting for more than six months. It occurs in approximately 1% of patients infected with *C. burnetii* and the classic presentation is that of endocarditis. Patients with previous valvular heart disease or underlying immunosuppression (transplantation, cancer, chronic renal failure) are at increased risk for chronic Q fever infection.

Diagnosis: The most important diagnostic clue is epidemiological information linking patient with a terrorist release or reservoirs, especially parturient or newborn animals. An immunofluorescence assay (IFA) is the current reference method for serodiagnosis of Q fever. The use of more rapid or novel diagnostic tests such as ELISA or PCR should be coordinated through the Regional Laboratory Network. BSL-2 precautions should be followed when processing tissue samples.

Decontamination: Patients who were recently exposed to airborne Q fever require removal of their clothing and washing of all exposed skin with soap and water for 2 to 3 minutes. Patients who are symptomatic (i.e., exposed several days ago) do not require decontamination.

Treatment: Q fever is usually a self-limited disease that resolves spontaneously and the case fatality rate is < 1%. Symptomatic patients may be treated with:

Doxycycline: 100 mg IV/PO q12h x 14 days*
Tetracycline: 500 mg PO q6h PO q6h x 14 days
Ofloxacin: 200 mg POq8h x 14 days
Pefloxacin: 400 mg PO/IV q12h x 14 days
Clarithromycin: 500 mg PO q12h x 14 days
Azithromycin: 500 mg PO x 1, then 250mg PO qd x 4 days

*For patients with underlying valvular heart disease, treatment should be doxycycline for one year in conjunction with hydroxycholorquine to prevent Q fever endocarditis

Prophylaxis: Chemoprophylaxis with tetracycline 500 mg every 6 hours or Doxycycline 100 mg every 12 hours for 5 to 7 days is effective if initiated within 8 to 12 days post-exposure. Chemoprophylaxis less the 7 days after exposure is ineffective and may only delay the onset of disease. Inactivated whole cell vaccine is available in Australia but has been associated with severe local reactions in those with pre-existing immunity.

Isolation and Personal Protection: Person-to-person transmission is rare and **respiratory isolation in not required**. Patients do not require a mask during transport. **Standard Precautions (gowns, gloves, mask)** are recommended for health care workers. Surface decontamination is accomplished with sodium hypochlorite (0.5%), phenol (1%), or hydrogen peroxide (5%).

Resource Links: http://www.cdc.gov/ncidod/dvrd/qfever/index.htm