

Q Fever, Acute (*Coxiella burnetii*)

Merlin reporting code = 08301
 Case report form (CRF): [Q Fever CRF](#)
PAPER CRF REQUIRED

Clinical description

Acute fever usually accompanied by rigors, myalgia, malaise, and a severe retrobulbar headache. Fatigue, night-sweats, dyspnea, confusion, nausea, diarrhea, abdominal pain, vomiting, non-productive cough, and chest pain have also been reported. Severe disease can include acute hepatitis, atypical pneumonia with abnormal radiograph, and meningoencephalitis. Pregnant women are at risk for fetal death and abortion. Clinical laboratory findings may include elevated liver enzyme levels, leukocytosis, and thrombocytopenia. Asymptomatic infections may also occur.

Clinical criteria for case classification

Acute fever **and** one or more of the following: rigors, severe retrobulbar headache, acute hepatitis, pneumonia, or elevated liver enzyme levels.

Laboratory criteria for case classification

Confirmatory:

- Serological evidence of a fourfold change in IgG-specific antibody titer to *Coxiella burnetii* phase II antigen by indirect immunofluorescence assay (IFA) between paired serum samples, (CDC suggests one taken during the first week of illness and a second 3-6 weeks later, antibody titers to phase I antigen may be elevated or rise as well),

OR

- Detection of *C. burnetii* DNA in a clinical specimen via amplification of a specific target by polymerase chain reaction (PCR),

OR

- Demonstration of *C. burnetii* in a clinical specimen by immunohistochemistry (IHC),

OR

- Isolation of *C. burnetii* from a clinical specimen by culture.

Presumptive:

- Single supportive IFA IgG titer of $\geq 1:128$ to phase II antigen (phase I titers may be elevated as well)

OR

- Serologic evidence of elevated phase II IgG or IgM antibody reactive with *C. burnetii* antigen by enzyme-linked immunosorbent assay (ELISA), dot-ELISA, or latex agglutination.

Notes

For acute testing, CDC uses in-house IFA IgG testing (cutoff of $\geq 1:128$), preferring simultaneous testing of paired specimens, and does not use IgM results for routine diagnostic testing.

Case classification

Confirmed:

A person with confirmatory laboratory evidence that either meets clinical case criteria or is epidemiologically linked to a case with laboratory evidence.

Probable:

A clinically compatible acute illness that has supportive presumptive evidence for past or present acute disease (antibody to Phase II antigen) but does not have confirmatory laboratory evidence.

Comments

Serologic profiles of pregnant women infected with acute Q fever during gestation may progress frequently and rapidly to those characteristic of chronic infection.

Exposure is usually via aerosol, is broadly interpreted, and may be unknown, but often includes the presence of goats, sheep, or other livestock, especially during periods of parturition. Direct contact with animals is not required, and variable incubation periods may be dose dependent.

 **Acute and convalescent sera from reported and suspect cases must be sent to the Bureau of Public Health Laboratories. This condition has been identified as a potential bioterrorism agent by the CDC.**

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