



THE UNIVERSITY OF TENNESSEE

Occupational Health Program

Q Fever

1.0 Introduction

Q fever is also known as “query” fever. It is a disease caused by the intracellular bacteria *Coxiella burnetii* and can occur in most domestic and wild animals that have been exposed to ticks. Animals can also contract Q fever through contact with body fluids or secretions (milk, urine, feces, or birthing products), from infected animals. It is commonly seen in domestic animals (goats, sheep, cattle, dogs, cats and fowl). The animals that prove the greatest risks are sheep or goats. Humans typically get Q fever when they breath in dust that was contaminated by infected animals.

2.0 People at Risk

Groups at high risk of contracting Q fever are those workers that routinely care for sheep and goats and especially those working with pregnant sheep, their newborns, products of birth (placenta, amniotic fluid), blood, or soiled bedding.

3.0 Transmission

Coxiella burnetii can be shed in urine, feces, milk, or fluids of the reproductive tract. The infection can be spread by aerosolization or ingestion. People may also get sick with Q fever by eating contaminated, unpasteurized dairy products.

4.0 Symptoms

Signs of Q fever are usually sudden onset of fever, chills, headache behind the eyes, weakness and profuse sweating, stomach pain, nausea, vomiting, or diarrhea. Illness typically develops 2-3 weeks after being exposed. Q fever may also be asymptomatic. Signs may progress to inflammation of lung tissue (pneumonitis), non-productive cough, and chest pain. Acute inflammation of the heart sac (pericarditis) and liver (hepatitis) may also occur. Most signs of Q fever resolve in 2 weeks.

Inflammation of the lining of the heart (endocarditis) can occur, especially in people with artificial heart valves. Any high-risk individuals with generalized signs of the flu should mention potential Q fever exposure to their physician.

5.0 Diagnosis, Prevention and Treatment

Q fever can be diagnosed in people by a blood test (serology). Q fever vaccines are not available in the United States. Prevention of Q fever is best accomplished by:

1. Providing separate housing areas for any sheep away from other animals can aid in preventing transmission to the other animals.
2. Using male and non-pregnant sheep when possible for research or teaching .
3. Appropriate disinfection of research areas and proper disposal of protective clothing upon completion of work. Protective clothing should be discarded upon leaving the laboratory or surgical area. Gloves should be worn at all times. Complete disinfection of the laboratory area should be done with a dilute bleach solution.
4. Serologic testing and removal of Q fever-positive animals.

*****Any person with heart disease, artificial heart valves, or who is immunocompromised should not work with intentionally infected animals which are being used for research, (sheep, goats, or cattle)!**

Treatment of Q fever includes:

1. Most people who are sick with Q fever will recover without antibiotic treatment.
2. Treatment with 2 weeks of doxycycline antibiotic treatment is recommended for people developing Q fever disease.
3. Chronic Q fever is a life threatening infection, requiring several months of combination antibiotic treatment including doxycycline and hydroxychloroquine.

6.0 Resources

CDC Q fever [link](#):

For further information related to possible zoonotic disease exposure, or further related resources, please contact UT Occupational Health Nurse Bryan Cranmore RN, COHN at bcranmore@utk.edu, or for urgent response the OHP nurse can be reached at 865-755-8924

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