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A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.
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Q fever (Query fever)

Q fever is a zoonotic disease caused by the bacterium *Coxiella burnetii*. The primary sources of human infection are infected cattle, sheep, and goats. Infection has also been noted in a wide variety of other animals, including cats and dogs. Human infection occurs most commonly by the inhalation of droplets or dust contaminated with infected animal urine, milk, faeces and slaughter offal. High risk groups include abattoir workers, veterinarians, animal attendants and farm workers. Human to human transmission is very rare. Approximately 500 cases of Q fever infection are notified in Australia each year.

The incubation period for Q fever varies, but symptoms will usually develop within 2-3 weeks after exposure. Acute cases of Q fever begin with sudden onset of non-specific flu-like symptoms such as fever, headache, malaise, myalgia, sore throat, chills, sweats, photophobia, non-productive cough, nausea, vomiting, diarrhoea, abdominal pain, and chest pain. Fever usually lasts for 1 to 2 weeks, but may persist for longer. Weight loss can occur and persist for some time. A significant number of patients with symptomatic infection will develop pneumonia and/or hepatitis. Most people recover from Q fever in two to six weeks and the illness usually confers life-long immunity from subsequent infection.

Chronic Q fever, characterised by infection that persists for more than six months, is uncommon but a more serious disease. Patients with acute Q fever can develop the chronic form many years after the initial infection. Complications of chronic Q fever include endocarditis, generally involving the aortic or mitral valves, and chronic fatigue (post Q-fever fatigue syndrome).

A diagnosis of Q fever is usually established by medical/occupational histories and blood tests. A diagnosis of Q fever is confirmed by serology.

Australian Therapeutic Guidelines recommend doxycycline for the treatment of acute Q fever in adults. Antibiotic treatment is most useful when initiated early in the illness and doxycycline 100 mg orally, 12-hourly for 14 days is usually effective. Alternatively, use chloramphenicol 500 mg orally or IV, 6-hourly for 14 days.

Chronic Q fever is much more difficult to treat effectively and often requires the use of multiple medications. In chronic disease or endocarditis, prolonged (18 months to 3 years) combination therapy including hydroxychloroquine may be needed. Cardiac surgery may be required to repair heart valve damage. Expert advice should be sought early.

A vaccine for Q fever is available in Australia. A single dose is given by subcutaneous injection after serological and skin testing have been performed and confirmation that both the tests are negative. People who have previously been exposed to *C. burnetii* should not receive the vaccine.

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