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Project Title: serological follow-up study after acute q fever infection in Taiwan

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Executing Institute: Centers for Disease Control

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Abstract:

Purpose: Q fever, a ubiquitous zoonosis caused by *Coxiella burnetii*, can cause acute or chronic infections in humans. In Taiwan, reported Q fever cases had increased since 2004 but indigenous investigations mainly focused on acute Q fever.

Methods: A prospective serological follow-up study was conducted from Aug to Nov. 2007. During this period, cases lived in southern Taiwan with their acute Q fever onset more than 6 months before our serological testing were eligible. A single serum sample with anti-phase I IgG titer ≥ 800 by the indirect immunofluorescence antibody assay is considered diagnostic of chronic Q fever, and for whom nested PCR were also performed.

Finding: Among the 267 eligible cases, 161 were contacted and 91 agreed to participate in our study. No one had ever been told about the risk of chronic Q fever until our notification. 17 persons were found to have chronic Q fever by serology (titers of anti-phase I IgG: 1:1280~5120, medium:1280) and no one had positive PCR results on blood samples. None of these cases was pregnant or immunocompromised except one with cured colon cancer when their acute Q fever occurred. Thorough physical examinations and complete blood testing did not support a diagnosis of chronic Q fever endocarditis. All cases did not receive anti-chronic Q fever medication and continued serological as well as clinical follow up was recommended.

Conclusion: Approximately 18% patients evolved into chronic Q fever after their acute infection in Taiwan. Most of them had titers of anti-phase I IgG within lower limit to that diagnostic of chronic Q fever and all were physically well, receiving no medication. Continuing clinical and serological follow up would be feasible for these patients.

Suggestion: Physicians should inform patients of the risk of chronic Q fever after acute infection. The strategy of routine serological follow up after acute Q fever may need to be implemented in Taiwan.

Key words: acute Q fever, chronic Q fever, endocarditis,