

Abstract

Chlamydia trachomatis is a major bacterial cause of sexually transmitted disease in females and males worldwide. Severity of the disease depends on type of infection, duration of infection, and serovar and strain of the infection. Awareness of the possibility of persistent *C. trachomatis* infection in sexually transmitted disease individuals is important, especially when current antibiotics may not be able to terminate the infection depending on the status of the infection, active or persistent infection. At present, no effective vaccine is available. Hence, this research indentified infection type and unique genetic characteristics of major *C. trachomatis* strains in females with lower and upper genital tract infections, before and after antibiotic treatment. The study revealed preliminary evidence and supporting information about the persistence of the chlamydiae after the antibiotic treatment, strengthening the importance and the necessity for further study on persistent *Chlamydia* and their unique serovar or genetic characteristic of tryptophan synthase A gene in clinical subjects in Thailand. This will promote enthusiasm to health officers and communities to find better strategies for disease control and treatment of this disease, helping to reduce the disease transmission occurrences between infected partners as well as from the infected mothers to their babies.