Agrarian residents in China are at increased risk of tick-borne anaplasmosis and ehrlichiosis and spotted fever exposure

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More and more evidences demonstrated that anaplasmosis and ehrlichiosis had been existed in China, especially an unusual transmission of nosocomial cases of Anaplasmosis occurred in Anhui Province in 2006. However, these tick borne zoonotic Rickettsioses are usually under recognized. To assess the risks of these diseases exposure among agrarian residents in China, a large serological investigation were performed from 2006-2009. For each investigated province or municipality, 3 or 5 rural counties were randomly selected based on the geographic locations. A total of 7,322 sera from agrarian residents and 819 urban residents were collected in 9 provinces and 2 municipalities, and the IgG antibodies against *A. phagocytophilum* and *E. chaffeensis* were detected by immunofluorescence assay (IFA). The overall seroprevalence of *E. chaffeensis* was 9.8% for agrarian residents and 2.4% for urban residents. The total seroprevalence of *A. phagocytophilum* was 15.4% for agrarian residents and 1.5% for urban residents. The seroprevalences of *E. chaffeensis* in Hainan (44.6%), Xinjiang (43.2%), and Beijing (19.4%) were higher than that in other areas while the seroprevalence (41.8%) of *A. phagocytophilum* in Tianjin was the highest and the seropositive rates in Hainan (39.2%), Anhui (33.7%) and Beijing (13.6%) were higher than that in other areas. The highest seroprevalences of these two pathogens were all identified in the young adults (age from 20-39 years). Animal contacts, planting crop and more than 2 years of employment were significantly increased the exposure risk of Anaplasmosis. Here we concluded that Chinese agrarian residents were at substantially increased risk of exposure. However, even among urban residents, risk was considerable.

Biography

Zhang-lijuan (M.D., Ph.D.) is the Director of the Dept. of Rickettisology, National Institute for Communicable Disease Control and Prevention, China CDC. She is one of members of the Committee of Natural Focus Disease, Ministry of Hygiene of People’s Republic of China, and a member of the National Zoonoses Committee. She and her colleagues reorganized the Dept. of Rickettisology, China ICDC in 2003. She has published more than 60 papers on the surveillance of rickettsiae and basic research on rickettsiae agents. Her primary research interests are the surveillance of rickettsial diseases and rapid diagnoses of rickettisoses and study on the pathogenesis of rickettsiae.

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