

Abstract

Lyme disease (LD) is an emerging infectious disease worldwide. In 1998, the first human case with LD identified in Taiwan initiated the researchers to investigate the potential hosts and vectors in the transmission, and to study the speciation of the pathogen in Taiwan. The reference laboratories of LD in northern and southern Taiwan were also set up to diagnose clinically suspected LD patients by the Center for Disease Control. According to the results, more cases were identified in the recent years. Based on these observations, this research project was then conducted to: 1) develop a standardized isolation and molecular diagnostic procedures in central Taiwan; 2) understand the epidemiology of LD in wild rodents in central Taiwan; 3) understand the epidemiology of LD in imported dogs from foreign countries as well as the domestic dogs in Kinmen, Ma-zu and Peng-Hu islands. The 232 rodents collected from various residential areas nearby humans, and from the low-elevation and high-elevation mountainous areas were culture-negative and PCR-negative for LD. A total of 356 domestic dogs collected in Kinmen, Ma-zu and Peng-Hu islands were also LD-negative, based on the results of culture, as well as molecular and serologic testing. However, three out of 143 dogs imported from foreign countries were PCR-positive for LD. The above results indicated that central Taiwan might not be a LD-highly epidemic area, especially in residential areas nearby humans. However, we should be aware of the possible transmission of LD from imported animals.

Keywords: Lyme disease ; epidemiology ; diagnosis ; animal reservoir