Abstract

Rat bite fever is one of rare zoonosis caused by Streptobacillus moniliformis that can be acquired through the bite or scratch of a rodent or the ingestion of food or water contaminated with rat feces or urine. The clinical syndrome is characterized by flu-like symptoms including fever, chills, headaches, and muscle pain that has easily been confused with other disease. The mortality rate could reach up to 13% cases if been untreated. Therefore, developing diagnostic method for S. moniliformis infection and current surveillance in Taiwan are much more important. The objectives of this research were conducted to develop a standardized isolation and molecular diagnosis procedure and serology detection methods. We adapt PCR to amplify 16S rDNA, which include 300 bp. The product was digest into 3 fragments by restriction enzyme, Baf I. The lipid fraction that extracted from S. moniliformis could be separated by high-performance thin-layer chromatography into 9 components. Three glycolipids of lipid components were reacted with polyclonal rabbit antisera by immunostaining assay. We also launch serology surveillance by IFA, focusing on rat and human. All of 20 rats caught from Kinmen and Matzu had reacted with S. moniliformis. Among 96 human sera, 86 samples(86.5%) had antibody titers more then 32X. This study indicates the possible infection of rat bite fever in Taiwan.

Keywords：rat bite fever；zoonosis；Streptobacillus moniliformis