

Abstract

Key Words : aboriginal villages, tuberculosis, RFLP, transmission

Tuberculosis remains an important local infectious disease in Taiwan, especially in aboriginal villages. In a study done in year 2000, aboriginal villages in Taiwan had a tuberculosis prevalence rate 2 to 15 times higher than other areas. In addition, tuberculosis patients in these regions had a 12-month cure rate of less than 50%. In order for the Center of Disease Control (CDC) to issue tuberculosis prevention policies and to further understand the bacterial strains involved in the aboriginal villages, this study aimed at TB culture positive patients from 3 aboriginal villages in Hualien within 2004~2005. X-ray screening was carried out in all three aboriginal villages (Sioulin, Jhuosi, Wanrong). Individuals that were suspected of having TB were managed with sputum examination. Reported cases diagnosed in other hospitals were also included in our study. Sputum examination for *M. tuberculosis* and drug resistance testing were carried out in the Tzu-Chi TB Laboratory. Bacterial cultures were sent to the CDC for IS-6110 Restriction Fragment Length Polymorphism (RFLP) and Spacer Oligonucleotide Typing (Spoligotyping) to determine bacterial strain, transmission site, and transmission factors. By understanding pathogen origin and transmission, early detection and treatment would hopefully decrease the infection and spread of TB.

In the first year of this study, 8404 individuals were screened with X-ray examination, of which 185 were suspected of having TB. From January to November of 2004, 130 bacterial cultures were collected. Preliminary molecular study revealed clustering in 52% of the strains. Continued investigation is being carried out to understand TB transmission.