Abstract

Detection of the Mycobacterium tuberculosis organism is the most important finding for the diagnosis of tuberculosis. Early detection and treatment are the keys to prevent the spread of tuberculosis. it is crucial to set up a tuberculosis Laboratory network. Tzu-Chi Hospital is the only medical center in eastern Taiwan. It is equipped with a good TB laboratory and has been carrying out laboratory examinations for health centers and clinics in Hualien and Taitung. By setting up convenient sites for sputum sample collection and by using express delivery, the samples are able to send quickly to the TB lab in Tzu-Chi medical center for a complete TB examination (including smear tests, culture, identification and drug sensitivity testing). The results are reported immediately via fax to the respective health centers. The Tzu-Chi TB laboratory has, in the past 3 seasons (since January, 2003 to September, 2003), carried out culturing of mycobacterium tuberculosis for 5, 943 samples. Of the samples tested, 636 strains were isolated (10.70%), with an contamination rate of 6.04%. 7,449 samples were tested for acid-fast stain. Of these samples, 328 were positive (4.40%). Tests were carried out for 2,310 samples from other health centers. Of these samples, 89 (3.85%) were positive for the acid fast stain smear test, and 283 (12.25%) were positive for the culture Of the 283 isolated Mycobacterium 203 strains were Mycobacterium tuberculosis.

Keywords: Mycobacterium tuberculosis；Laboratory examinations；Tuberculosis laboratory network