Abstract

Objective.---To evaluate the patterns of drug resistance of Mycobacterium tuberculosis in eastern Taiwan.

Method.---One hundred fifty-seven isolates collected from January 2001 through September 2002 were tested for drug susceptibility using the modified proportion method and the MGIT AST SIRE system at the Tzu Chi General Hospital.

Results.---The overall rate of resistance to at least one drug was 26.8% The combined resistance rates to individual drugs were : isoniazid, 19.7% ; streptomycin, 8.3% ; rifampin, 11.5% and ethambutol, 12.7%. Among the 127 isolates from patients with no prior treatment, 15.7% of Mycobacterium tuberculosis strains were resistant to at least one drug. Resistance to isoniazid (11.0%) or ethambutol (5.5%) or streptomycin (4.8%) was more common than resistance to rifampin (1.6%). The prevalence of primary multidrug resistance was 1.6 %.

Among the 30 isolates from patients with histories of treatment, the prevalence of resistance to any of the four drugs was 70%. The acquired resistance rates to individual drugs were : isoniazid, 56.7% ; streptomycin, 23.3% ; rifampin, 53.3% and ethambutol, 43.3%.

Agreement rates between MGIT AST SIRE results and the proportion method were 95% for isoniazid, 94.3% for streptomycin, 95.6% for rifampin and 93.0% for ethambutol.

Conclusion. The prevalence of drug resistance is very high in eastern Taiwan, therefor the surveillance for anti tuberculosis-drug resistance should be repeated each year.

Measures to protect rifampin such as DOTS, are greatly needed to decrease the multi drug resistance rate.

Keywords: Drug resistance pattems；tuberculosis；Eastern Taiwan