

Antituberculosis Drug Resistance in Korea, 1998-1999

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Nation-wide sample survey based on pulmonary tuberculosis patients registered in 245 health centers in Korea was conducted to measure the prevalence of antituberculosis drug resistance and to assess its impact on treatment outcome under the National Tuberculosis Programme.

Assuming a 15% drop in sampled cases, the sample numbers finally required for this survey was estimated at 2,132 cases with 1.3% precision and 95% probability, which could be selected systematically in all health centers throughout the country during the 5-month period from 1 October to 28 February 1999.

Total 2,653 *M. tuberculosis* were isolated from 3,008 sputum-positive cases sampled and submitted to the drug susceptibility testing (DST). Out of 2,370 new cases initial drug resistance (IDR) to one or more antituberculosis drugs was found 258 (10.9%, 9.6~12.1% at 95% CI) where the majority had resistance to one drug (160/258, 62.0%). IDR to 1, 2, 3, 4, and 5 and more drugs was 6.8%, 2.1%, 1.1%, 0.6%, and 0.3% respectively; any

INH resistance was found in 8.6%; any SM, 3.1%; any RMP, 3.0%; any EMB, 1.1%; any INH+RMP, 2.2%.

Acquired drug resistance (ADR) was found in 63 (22.3%, 17.4~27.1% at 95% CI) among 283 patients with history of chemotherapy. ADR to 1, 2, 3, 4, 5 or more drugs was 9.9%, 6.7%, 2.1%, 1.8%, and 1.8% respectively; any INH, 17.3%; any RMP, 10.3%; any INH+RMP, 7.4%; any SM, 6.7%; any EMB, 3.5% in order.

The overall IDR of male patients was 11.8% (178/1,512), which was not significantly higher than that of female patients (9.3%, 80/858, $p>0.05$). The general trend by age group was not significant ($p>0.10$).

Compared with the data from the 1994 survey (11.3% in IDR, 10.1~12.5% at 95% CI) conducted in the same method, the resistance to antituberculosis drugs in Korea has not been changed significantly. The present study also reaffirmed the inverse relationship of the drug resistance rate with the efficiency of a treatment programme.