

MOLECULAR EPIDEMIOLOGY OF TUBERCULOSIS IN PRAGUE AND SOUTH MORAVIA, CZECH REPUBLIC: GENETIC ANALYSIS OF *MYCOBACTERIUM TUBERCULOSIS* ISOLATES BY IS6110-RFLP FINGERPRINTING AND SPOLIGOTYPING

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SUMMARY

Objectives: To genetically characterize and compare *Mycobacterium tuberculosis* isolates among culture-confirmed TB cases in two regions in the Czech Republic in 1998.

Methods: Consecutive *M. tuberculosis* isolates from 111 TB patients in Prague and 120 patients in the South Moravia region were genotyped using the standardized IS6110 Southern blot hybridization method and by spoligotyping.

Results: Eighty of the Prague patients (72.1%) had isolates with unique RFLP patterns, while 31 (27.9%) had isolates which belonged to 10 clusters. Seventy-eight (64.7%) of the South Moravia strains displayed unique RFLP pattern and 42 (35.3%) were assigned into 15 clusters. The spoligotype profiles previously identified in the U.S. were found in 69 (33%) samples and newly identified Czech spoligotypes in 24 (11.4%) of the total number of examined strains.

Conclusions: The present population-based molecular epidemiological study performed in two regions of the Czech Republic in 1998 demonstrated the distribution of individual genotypes as well as clustered strains of *M. tuberculosis* isolated from TB patients, and confirmed the similarity between the Czech strain collection and the European Community TB Database, that includes countries with low TB rate. The sporadic import of TB cases from foreign countries and recent transmission events probably do not play significant roles in the epidemiological situation in the Czech Republic.

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