Annual risk of tuberculous infection in Taiwan, 1996-1998

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摘要

Abstract

Tuberculosis is still an important public health issue in Taiwan, and monitoring the trend of annual risk of infection (ARI) with Mycobacterium tuberculosis is essential. In this study, we conducted tuberculin skin tests to estimate the prevalence and annual risk of M. tuberculosis infection in first-grade schoolchildren in Taiwan Province. Because mass bacille Calmette-Guérin (BCG) vaccination programs have been carried out here, only non-BCG-vaccinated students were tested. From September 1996 through June 1998, there were 520,866 registered first-grade elementary school students in Taiwan Province. Of them, 15,147 (2.9%) were non-BCG-vaccinated, as determined by the absence of a BCG scar. All of them were tested for M. tuberculosis infection with 1 tuberculin unit (0.1 mL injection) of purified protein derivative RT23, by means of the Mantoux technique. Among the tested schoolchildren, 430 (2.8%) had a positive tuberculin reaction. Thus, the calculated ARI was 0.44%. The ARI varied in different areas of Taiwan, being highest (1.04%) in Nantou County and lowest (0.14%) in Miaoli and Tainan Counties. The ARI in aboriginal areas (1.16%) was 2.7 times that in nonaboriginal areas (0.42%). Our results indicate that the M. tuberculosis ARI is still high in Taiwan. To achieve the World Health Organization target of less than 0.1% for industrialized countries, we must intensify tuberculosis control programs in Taiwan.