Preservation of clinical isolates of Mycobacterium tuberculosis complex directly from MGIT culture tubes

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摘要

Abstract

Preservation of M. tuberculosis complex strains isolated from clinical specimens is important for epidemiological investigations related to tuberculosis. In this study the efficacy of preservation was evaluated by calculating the recovery rate of preserved strains, with various patterns of resistance, after periods of storage and subculture. The recovery rates from strains preserved in enriched solid medium were >90% for storage periods 6 yr. However, this procedure for storing mycobacteria is time-consuming, labor-intensive, and impractical for routine use in a clinical laboratory setting. This study shows that recovery rates for strains preserved directly from MGIT fluids are satisfactory for storage periods 2 yr. No significant difference in viability was observed within 3 categories of drug resistance: (i) all-susceptible, (ii) multi-drug resistant (MDR), and (iii) a combination of other patterns of resistance. Preserving clinical M. tuberculosis strains directly from MGIT culture fluid fits easily into laboratory routine and is feasible for use in a clinical laboratory setting.