RAPID SPECIES IDENTIFICATION OF WILD MYCOBACTERIAL ISOLATES BY MONOCLONAL ANTIBODIES IN ELISA

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SUMMARY

An enzyme-linked immunosorbent assay (ELISA) for the identification of cultured mycobacteria belonging to the Mycobacterium tuberculosis complex and Mycobacterium kansasii originally described by R. Schönlingh, C. P. J. H. Verstijnen, S. Kuijper and A. H. J. Kolk (1) was used for identification of mycobacteria from three week old primary cultures. A panel of six monoclonal antibodies (MoAbs) was used: two were specific for Mycobacterium tuberculosis (M. tuberculosis) complex, one for M. kansasii, one was directed against M. avium complex and two were broadly reacting with all mycobacterial species.

The ELISA was introduced to a microbiology laboratory located in an area where M. kansasii infections are endemic. All acid-fast bacteria isolated from sputum samples over a one month period were identified by ELISA and culture. All fifteen M. tuberculosis isolates and all seventeen M. kansasii were correctly identified by ELISA before culture results were known. Two of three M. avium complex strains could be identified in ELISA as belonging to the M. avium complex using the M. avium complex specific monoclonal antibody.

Key words: ELISA, diagnosis, monoclonal antibodies, M. tuberculosis complex, M. kansasii endemic area

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