THE APPLICATION OF ENZYME-LINKED IMMUNOSORBENT ASSAY
IN DETECTION OF ANTI-PPD ANTIBODY IN SERUM AND OF MYCOBACTERIAL
ANTIGEN IN SPUTUM OF PULMONARY TUBERCULOSIS PATIENTS

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SUMMARY

The developments of an indirect ELISA for immunoglobulin G antibody detection and a modified double antibody sandwich method for Mycobacterium tuberculosis antigen detection were assessed in 3 groups of pulmonary tuberculosis patients. It was found that 48% (24 of 50 cases) were positive for antibody and 92% (46 of 50 cases) for antigen in pulmonary tuberculosis patients proven by chest roentgenogram and positive sputum culture, while 50% (20 of 40 cases) for antibody and 95% (38 of 40 cases) for antigen in pulmonary tuberculosis patients proven by chest roentgenogram and acid fast staining, and 36.1% (13 of 36 cases) for antibody, 50% (18 of 36 cases) for antigen in those with only positive chest roentgenogram. In comparison with non-mycobacterial pulmonary patients or healthy control group 30% (12 of 40 cases) were antibody positive but only 5% (2 of 40 cases) of the patients or 8% (4 of 50) of healthy subjects were antigen positive for ELISA. From this study, the developed method seem to be more sensitive, simpler and rapid than chest X-ray, the insensitive AFB smear and the time consuming culture, especially for the large scales diagnosis of pulmonary tuberculosis.