

TUBERCULOSIS AND LUNG DISEASE

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Strong association of tuberculosis and bronchial anthracofibrosis

Majid Mirsadraee

Islamic Azad University, Iran

Bronchial anthracofibrosis (BAF) is the black discoloration of bronchial mucosa associated obliteration of large and small airways and clinical manifestation resembling COPD but albeit without smoking. Chung et al introduced BAF first in modern era to the world and he believed that tuberculosis (TB) as the main cause of BAF. Later many studies in Korea, Turkey and Iran reported frequency of tuberculosis in BAF. Among the eight studies on anthracofibrosis, six studies showed a significantly higher frequency of TB (32.3%) in comparison to the control groups. The cumulated Odds Ratio of TB in all studies of anthracosis was 3.16 (95% CI = 2.49 – 6.85). Laboratory techniques used in these studies were mainly acid fast bacilli staining, Löwenstein-Jensen, and Middlebrook culture and histopathology. Histopathology usually revealed granuloma formation and macrophage containing anthracotic nodules. Two new studies used molecular technique and PCR for better evaluation of tuberculosis. They reported positive results in 37-40% which are the highest frequency of tuberculosis reported in BAF. PCR and finger print method was also used for evaluating

the origin of mycobacterium tuberculosis. Spoligotyping of *M. tuberculosis* showed four distinct patterns: East-African-Indian (11, 47.8%) and Central-Asian (7, 30.4%), Haarlem I (4, 17.4%) and T-1 (1, 4.3%) which were similar to their community in Iran and middle east. Therefore we can conclude that BAF is susceptible to tuberculosis due malfunctioning to alveolar macrophage occupied by anthracotic nodule and there are not a cause and effect relationship between tuberculosis and BAF.

Speaker Biography

Majid Mirsadraee is Professor in Department of Internal Medicine, Islamic Azad University- Mashhad branch. He has completed his sub-specialty in pulmonary medicine in Mashhad University of Medical Sciences, Iran. His expertise in pulmonary medicine are endobronchial ultrasonography, tuberculosis, fungal and lophomonas infection of lung and severe asthma. His interests in research are anthracosis of lung and triazole therapy for severe asthma. He has over 50 publications that have been cited over 180 times, and his/her publication H-index is 7. He is Editor in Chief in Medical Journal of Islamic Azad University and Member of Editorial Board in *Journal of Cardio-Thoracic Medicine*.

e: majidmirsadraee@mshdiau.ac.ir

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