



MYCOBACTERIUM GORDONAE - A POSSIBLE CAUSE OF INDETERMINATE CHEST CT CHANGES IN IMMUNOCOMPETENT PATIENTS

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Objective:

Introduction: *M. Gordonae* is an omnipresent organism and slow-growing mycobacteria that is regarded as a saprophyte rather than pathogenic Non-tuberculous Mycobacteria as it has only rarely been demonstrated to be a cause of infection. Therefore, is often difficult to discern true mycobacterial infection from colonization or contamination.

Many previous studies have shown extremely low pathogenicity of *M. gordonae*, which is why they did not have been considered as a probable cause of disease in humans. Some studies confirmed the *M. gordonae* as a cause of disease in an immunocompromised patient, and even sometimes in immunocompetent individuals.

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Case reports: Three patients identified with *M. gordonae* positive culture presented with a dry cough and weight loss in a period of a few months, without high body temperature and any other symptoms. After confirmation of *M. gordonae* in sputum, CT lung scan was performed. The PET/CT examination showed no pathological metabolic accumulation which excluded malignant disease. TB infection and other lung infections were also excluded.

One patient presented with varicose bronchiectases only. Other two patients showed centrilobular („tree in bud“) and perilymphatic pattern of noncalcified solid nodules, but also calcified nodules on chest CT predominantly in the right upper and lower lobe. In one case CT scan also showed consolidations, mild and moderate grade emphysema and varicose bronchiectasis. The intrathoracic lymphadenopathy and pleural effusion were not detected. Accordingly, the findings were suggestive of acute pulmonary infection in one patient. Follow-up CT scan showed partial regression after administration of antimicrobial treatment with no microbiological confirmation.

Conclusion: There are several studies and case reports on the pathogenic impact of *M. gordonae* in immunocompetent individuals.

In this case reports chest CT showed pathological findings suggestive of lung infection in patients with *M. gordonae* positive culture, who presented with mild respiratory symptoms. There was no other finding to suggest some other causative infectious agent.

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The awareness of *M. gordonae* biology and lung infection possibility can help the radiologist to assess the activity of disease with more accuracy and confidence. The importance of imaging is highlighted in the fact that morphological confirmation plays an important role in supporting clinical suspicion for *M. gordonae* in reaching the final diagnoses and success in therapy.