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## Pulmonary Actinomyces in a Diabetic Patient

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**Introduction:** Pulmonary actinomyces is still a compelling issue for clinicians. Since it may resemble other infectious and malignant diseases clinically, the diagnosis can often be made only after a surgical procedure. Presently described is a rare case of pulmonary actinomyces in a patient with uncontrolled diabetes mellitus.

**Case Presentation:** A 71-year-old male patient was admitted with chronic cough, sputum production and weakness. The patient had the same complaints for about 9 months. Oral antibiotics were prescribed several times. Since no clinical or radiological progress was obtained, the patient was hospitalized for further investigation. He had a past history of hypertension, diabetes mellitus, benign prostate hypertrophy and ischemic heart disease for more than ten years. He had a surgical procedure for dental prosthesis approximately two months before the symptoms' onset. On physical examination, the general condition was good, vitals were normal, and coarse crackles were present on auscultation above the right lung. Biochemical findings were as follows: Erythrocyte sedimentation rate: 59 mm/hr, leukocyte count: 19.870/mm<sup>3</sup> hemoglobin: 12.6 g/dL, haematocrit: 39.6%, fasting glucose: 375 mg/dL crp: 12.6 (normal limits: 0-0.5). On chest X-ray, a nonhomogeneous opacity in the right middle and lower zones was observed. Peribronchial thickening, focal consolidation areas, pleural irregularities, and pleural fluid reaching up to 4.5 cm thickness on the right hemithorax and right hilar lymphadenopathies were observed on thorax computed tomography. Fiberoptic bronchoscopy was performed in order to rule out malignancy. The inlet of the anterior segment of the right lower lobe bronchus was narrowed by external compression. There was no endobronchial lesion. Mucosal punch biopsy and bronchial lavage fluid were obtained for microbiological and pathological investigation. There was no microbiological growth on bacterial cultures. Pathological examination demonstrated presence of chronic suppurative findings with Actinomyces like organisms. 200 mg/kg ampicillin therapy was administered intravenously. After 5 days, dramatic clinical and laboratory response were noted despite there was no marked improvement on radiologic findings.

**Conclusion:** Actinomyces are microaerophilic, gram positive commensals of the oral cavity which have the ability to erode through tissue planes under certain conditions. Pulmonary infection with Actinomyces species is uncommon, and usually results from aspiration of oropharyngeal secretions in those with chronic dental infections, extension from a cervicofacial infection, or hematogenous spread from a distant source. Chest imaging may provide some clues, but a definitive diagnosis often relies on a pathological examination of the infected tissue.

**Keywords:** Pulmonary actinomyces, opportunistic infections, diabetes mellitus