

Necrotizing tracheobronchitis; A rare form of pulmonary actinomycosis

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Pulmonary actinomycosis is an infrequent chronic, suppurative granulomatous disease caused by *Actinomyces* spp., anaerobic Gram-positive bacteria. Because the pulmonary actinomycosis is mostly accompanied by nodule, it is difficult to distinguish from malignancy or tuberculosis. But it is rare to appear in the form of necrotizing tracheobronchitis. Here, we report a case of pulmonary actinomycosis presenting as necrotizing tracheobronchitis diagnosed by bronchoscopic biopsy. A 45 year-old-man admitted to hospital because of cough and hemoptysis for 2 weeks. He was a heavy alcoholic and his medical history included Diabetes mellitus. His vital signs were as follows: body temperature 36.8°C, blood pressure 120/80 mmHg, heart rate 107ppm, O₂ saturation of 98% on room air. The white blood cell count was 7390 cells/ μ L and the C-reactive protein level was 17.11 mg/dL. Initial chest radiography showed right hilar enlargement and diffuse peribronchial thickening in right mid to lower lung. Contour of airway column were obliterated at carina and right main bronchus. Sequential chest CT showed severe irregular wall thickening of airway with intramural low attenuation and air bubbles from distal trachea to right lobar bronchus (Fig.1). For diagnosis, we performed fiberoptic bronchoscopy. Bronchoscopy showed mucosal necrosis with mucopurulent secretion from distal trachea to basal segment bronchus of right lower lobe (Fig.1). Histologically, the biopsy specimen revealed sulfur granule with surrounding many neutrophils, compatible with actinomycotic colonies. The Gram stain and GMS also showed filamentous rods (Fig2). Necrotizing tracheobronchitis is mostly caused by bacteremia and fungus. Necrotizing tracheobronchitis due to *actinomyces* spp. is a rare form of pulmonary actinomycosis. Pulmonary actinomycosis should be considered in the differential diagnosis of necrotizing tracheobronchitis. We believe that bronchoscopic biopsy may be useful for differential diagnosis.

