Pulmonary tuberculosis infection in the setting of Interstitial Lung Disease

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Introduction: Tuberculosis (TB) is a contagious airborne infection with many undiagnosed cases. Here we present a case of pulmonary tuberculosis that was treated in a 9-month course in a patient with a history of ILD.

Case Presentation: A 78-year-old man has a past medical history significant for idiopathic pulmonary fibrosis, hypothyroidism, coronary artery disease, hypertension, and obstructive sleep apnea. The patient was diagnosed with progressive idiopathic pulmonary fibrosis in 2013 and developed hypoxic respiratory failure. He was intolerant to Nintedanib and deemed unfit for a lung transplant. Therefore, the patient was instructed to use the albuterol inhaler and attend pulmonary rehab. In July 2021, he presented with cough, fatigue, dyspnea, and a decreased appetite. Treatment with amoxicillin-clavulanate was ineffective and his COVID-19 test was negative. Imaging showed a left upper lobe infiltrate and his chest CT (Computed Tomography) displayed left upper lobe consolidation with necrotic changes concerning for severe pneumonia. He was treated with IV ceftriaxone, oral azithromycin, and discharged with a 5-day course of cefdinir. After no improvement, he returned, and Tuberculosis was diagnosed with bronchoscopy with positive acid-fast staining and TB PCR (Polymerase Chain Reaction). The patient completed a 9-month treatment course with infectious disease follow-ups afterward. He had a negative acid-fast bacilli since September 2021.

Conclusion: Diagnosing a TB infection in ILD patients can be difficult due to the presence of interstitial processes and fibrosis masking the infection. In this case, atypical radiological patterns initially led to a misdiagnosis of pneumonia. Once TB was confirmed, the treatment regimen was successful. Clinicians managing ILD patients must rule out mycobacterial infections, such as TB, through a comprehensive diagnostic approach.

