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invasive pulmonary aspergillosis mimicking cancer in an immunocompetent pateint

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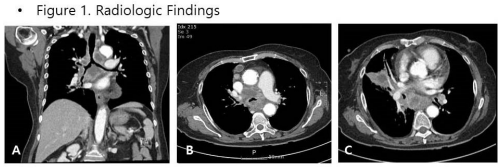
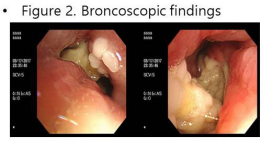
Invasive pulmonary aspergillosis (IPA) typically manifests as single or multiple nodules with or without cavitation, patchy or segmental consolidation, or peribronchial infiltrates. IPA, which involves mediastinum in an immunocompetent host, is very rare. We report a case about misdiagnosis of lung cancer due to bulky mediastinal mass in invasive pulmonary aspergillosis. A 66-year-old woman admitted our hospital for worsening dyspnea for a month. Other symptoms were unremarkable. She had no other medical history and did not take any medications before. Her radiologic findings showed multiple lymph nodes enlargement and irregular luminal narrowing of trachea and both main bronchus (figure 1). In the bronchoscopy, cavitation formation covered with necrotic tissue was observed below the level of carina (figure 2). Initial assessment was malignancy or endobronchial tuberculosis with lymphadenitis. The pathology from the bronchoscopic biopsy was consistent with aspergillosis. The results of AFB smear and TB-PCR were negative (table 2). Serum laboratory tests for fungal infection were all positive (table 3). **Discussion:** IPA is the most common fungal infection and can be suspected when symptoms and images do not improve despite using broad-spectrum antibiotics in immunocompromised host. However, IPA is very rare in immunocompetent patients, therefore, proper diagnosis and treatment may be delayed. Although radiologic findings may help to diagnose IPA, it is not easy in cases with unusual findings. In this case, the patient was in an immunocompetent state, and radiologic findings were also unusual with bulky mediastinal mass. Because of the possibility of an error in the examination, we performed endoscopic examination, twice. The results were same, and she finally diagnosed IPA. The mortality rate of IPA is high ranging from 30% to 50%, despite the proper treatment. Therefore, it is important to recognize the clinical features of extra-pulmonary aspergillosis as early as possible and to initiate the aggressive proper treatment. And without prejudice, to examine and evaluate of patients, is most important attitude in clinicians.

• Figure 1. Radiologic Findings



(A) – (C) Irregular luminal narrowing with wall thickening of trachea and main bronchus
Multiple enlarged, conglomerated lymph nodes in both upper and lower paratracheal, subcarinal, prevascular, both hilar areas

• Figure 2. Broncoscopic findings



Under carina, cavitation formation covered with necrotic tissue was observed.

Table 1. Initial Lab finding

WBC	10.13	10^3/ul
Hemoglobin	10.6	g/dl
Platelet	347	10^3/ul
Seg. Neutrophil	70.5	%
BUN	11	mg/dL
Creatinine	0.47	mg/dL
AST(SGOT)	17	U/L
ALT (SGPT)	8	U/L
CRP	2.35	mg/dl
CEA	44.6	ng/mL
CA 19-9	188.0	U/mL
CA 125	58.8	U/mL

Table 2. Results of bronchoscopy and biopsy

TB PCR	**Negative**
Liquid based cytology	**Negative for malignancy**
Bronchoscopic biopsy	**Fungal hyphae, consistent with Aspergillosis**

Table 3. Serum tests for fungal infection

(1-3)-β-D-Glucan Quantitative Test	positive
Aspergillus Ag (Galactomannan)	positive

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Rifampin induced hemolytic anemia with acute kidney injury in pulmonary tuberculosis patient

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Rifampin is currently one of the essential drugs in the standard treatment of pulmonary tuberculosis and its adverse effects are well known. But rifampin induced hemolytic anemia with acute kidney injury is very rare, so we report about this A 56-year old woman was hospitalized for nausea and vomiting via outpatient department. Patient diagnosed with pulmonary tuberculosis and TB lymphadenitis 8days ago, treatment with Isoniazid 300mg/day, Rifampin 600mg/day, Ethambutol 1200mg/day, and Pyrazinamide 1500mg/day The laboratory examinations were performed after admission: white blood cells (WBC) 22.5 x 103/㎕, red blood cells (RBC) 3.91 x 106/㎕, hemoglobin (Hb) 10.6 g/dl, hematocrit 31.7%, platelets 269 x 103/㎕, creatinine 3.28 mg/dl, sodium (Na+) 135 mEq/l, potassium (K+) 5.0 mEq/l, calcium (Ca+) 8.5 mg/dl, alkaline phosphatase 47 U/L; aspartate transaminase 210 U/l; alanine transaminase 56 U/l, lactate dehydrogenase (LDH) 1273 U/l, γ-GT (Gamma-GTP) 78 U/l, total bilirubin 2.1 mg/dl with proteinuria. And next day follow up laboratory finding were WBC 22.5 x 103/㎕, RBC 3.91 x 106/㎕, Hb 12.6 g/dl, hematocrit 38.4%, platelets 450 x 103/㎕, creatinine 0.44 mg/dl, Na+ 141 mEq/l, K+ 4.3 mEq/l, Ca+ 9.6 mg/dl, alkaline phosphatase 56 U/L; aspartate transaminase 50 U/l; alanine transaminase 51 U/l, LDH 217 U/l, γ-GT 49 U/l, total bilirubin 0.9 mg/dl, haptoglobin 84mg/dL, RBC hemolysis can be seen in PB morphology, direct coomb`s test 1+, but anti-IgG, C3 tests are negative. After admission, she appealed oliguria, fever, chill, nausea during 3days, and her symptoms was worsening, with kidney failure, uremic symptoms, so we start hemodialysis. We clinically diagnosis Acute hemolytic anemia with acute kidney injury due to tuberculosis medication, so we tested antibody elution test and kidney biopsy We can see Rifampin induced immune complex at elution test and acute tubular injury at kidney biopsy. Rifampin induced hemolytic anemia with acute kidney injury by immune complex case is very rare and prove it with elution test is not well reported. But we prove it by elution test with picture so I'll introduce about that.