Pulmonary alveolar proteinosis radiology

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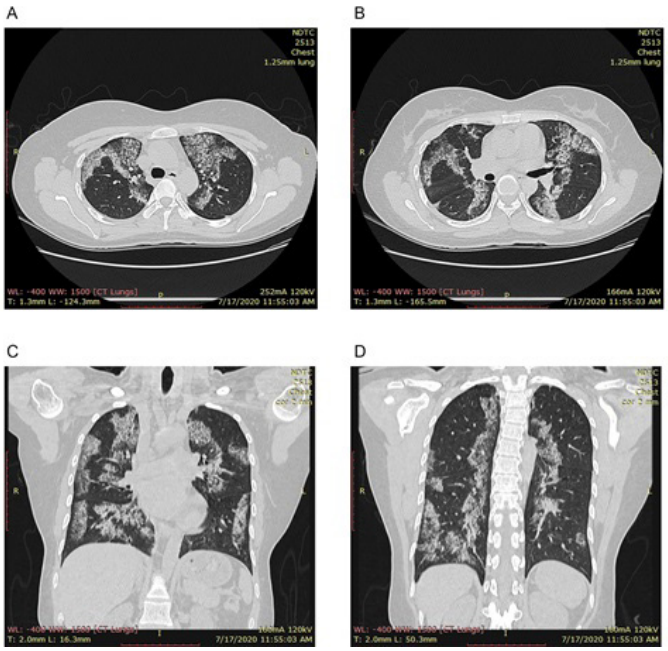
Introduction: Pulmonary alveolar proteinosis is a rare, diffuse interstitial lung disease, characterized by alveolar obstruction due to the accumulation of pulmonary surfactant. The most common clinical symptoms were gradual onset, progressive dyspnea (91%), cough (73%), fever (4%) and chest pain (18%). Nine percent of the patients were asymptomatic. On physical exam, fine rales were found in 55%, clubbing in 45%, cyanosis in 18% of the patients; and 18% were found to be normal by physical examination[1].

Aim and method: We studied the case of the patient who came to our outpatient examination office without any symptoms and complains and performed chest radiograph examination.

Results: Based on the chest radiograph result radiologist suspected some interstitial pulmonary disease /Picture 1/, then chest CT examination was recommended. Additionally, there was no prior history or exposure to tuberculosis, smoking or alcoholism. Family history was unknown. Computed tomography of the chest without contrast showed multiple areas of "crazy paving" involving both lungs in a random distribution with smooth thickening of interlobular and intralobular septal lines.

The present case of pulmonary alveolar proteinosis underlines the relationship of the disease with nonspecific symptoms and signs, and characteristic radiologic and tomographic findings. This suggest that we should be more careful on caring patients with the diffuse interstitial pulmonary disease. On the other hand, it is worth noting that there are still many aspects of the disease that are unknown, and further research is needed.

Discussion: In our case, we cannot suspect any kind of causes based on patients life history, even cannot exclude an autoimmune form[2]. On Chest CT, diffuse ground glass opacities with septal, intra and interlobar superposition of the thickening; a pattern known as "crazy paving" were observed, which is the characteristic of this disease[3]. We sent her to pulmonologist for whole lung lavage, as a therapeutic method and final histological examination. Differential diagnosis should include other disorders with similar radiological findings. These may be: *Pneumocystis jirovecii* and *Mycoplasma* sp pulmonary infections, non-cardiogenic and cardiogenic pulmonary edema, lipoid pneumonia, drug-related hypersensitivity reaction, organizing pneumonia, acute interstitial pneumonia, diffuse alveolar damage overlapped with usual interstitial pneumonitis, alveolar hemorrhagic syndromes, and what used to be called mucinous bronchioloalveolar carcinoma[4].



Picture 1. NECT axial /A and B/ and coronal /C and D/; shows diffuse ground glass opacities with septal, intra and interlobar superposition of the thickening; a pattern known as "crazy paving" is observed, which is characteristic of this disease.

Conclusion: The present case of pulmonary alveolar proteinosis underlines the relationship of the disease with non-specific symptoms and signs, and characteristic radiologic and tomographic findings; which we need to take into account when we are caring for patients with diffuse interstitial pulmonary disease. On the other hand, it is worth noting that there are still many aspects of the disease that are unknown, and further research is needed.

Acknowledgements: We thank colleagues of Second State Central Hospital of Mongolia for assistance on writing this case.

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