Pulmonary Artery Pseudoaneurysm Secondary to Lung Abscess

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A 90-year-old man with hypertension and parkinsonism presented at a private clinic with shortness of breath and palpitation. His chest X-ray showed infiltration in the right middle lung field, which was revealed to be bacterial pneumonia. He had no sputum and a negative result for urinary antigen of Streptococcus pneumonia, cefotaxime was admitted in empirically. As the shadow of the right lung did not change one week after the start of antibiotics treatment, computed tomography (CT) was performed. Consolidation in the right upper lobe with a low density area was shown in the chest CT scan, and he was diagnosed as lung abscess. Then, the antibiotic was replaced with ampicillin/sulbactum.

Fourteen days after admission, he began to have hemoptysis. Another enhanced CT with maximum intensity projection (MIP) and multi planar reconstruction (MPR) images showed an enhanced small nodular lesion in the abscess formation (Picture 1A, 2A, 2B) compatible with a pulmonary aneurysm. Only antibiotics treatment without intervention, such as bronchial artery embolization, was continued. Eight days after the second CT, repeated enhanced CT showed disappearance of aneurysm (Picture 1B).

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Pulmonary artery aneurysm (PAA) or pseudoaneurysm has several etiologies (1, 2). Infection is one of the important pathogenetic factors. Although, *Mycobacterium tuberculosis* is a relatively common cause of PAA (termed Rasmussen’s aneurysm), infection of pyogenic lung abscess (3) might also be a cause of PAA.

In this case, enhanced CT with MIP and MPR images provided a clear picture of PAA. These methods may be useful for the detection of PAA without pulmonary artery angiography.

Although, many cases with PAA are reported to be successfully managed with pulmonary artery embolization or surgical resection (3, 4), Kim et al. have reported that Rasmussen’s aneurysm disappeared after 9 months of treatment with tuberculous medicine (5). This case is important to alert physicians to the existence of PAA caused by lung abscess, and to note that PAA can be managed with appropriate antibiotics treatment alone.

References


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