

## Hemoptysis as the Initial Manifestation of Takayasu's Arteritis: A Case Report

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**Introduction:** Takayasu's arteritis is a disease that involves aorta and its branches. It may show fever, fatigue, weakness, weight loss, and joint pain in the acute phase. Nevertheless, in some cases, symptoms of the chronic phase such as organ-related symptoms as a result of aortic and its branches' stenosis may be the initial presentation. Here, we report a rare case with Takayasu's arteritis where hemoptysis is the initial presentation, attributed to the involvement of the pulmonary arteries. To our knowledge, this is a case that has not been reported in Korea.

**Case report:** A 41-year-old male, who is a non-smoker without any pre-existing comorbidities, was admitted to the hospital with a recent onset of hemoptysis that began four days ago. The amount of hemoptysis was approximately 50cc, occurring six times, but vital signs were stable without fever. Chest CT revealed wall thickening in both pulmonary arteries and thoracic aorta, as shown in Figure 1. In the laboratory tests, erythrocyte sedimentation rate (ESR) was 88 mm/hr, and C-reactive protein (CRP) was 2.1 mg/dL. Bronchoscopy was performed for differential diagnosis, which showed no abnormal finding except for redness of the mucosa (Figure 2). Tuberculosis and fungal infection through Broncho-alveolar lavage as well as IgG4 immunostaining on biopsy were all negative. On PET CT, hypermetabolic wall thickening along the ascending and descending aorta was observed (Figure 3), compatible with Takayasu's arteritis. Echocardiography revealed normal left ventricular systolic function without pulmonary hypertension. After starting prednisolone at a dose of 60mg (1mg/kg/day), the patient experienced improvement in hemoptysis within one week. Methotrexate was subsequently employed as a maintenance therapy. Presently, the patient is asymptomatic on a regimen of 15mg/week of MTX and 20mg/day of prednisolone. Furthermore, there is evidence of improvement in inflammatory markers, with the ESR at 40 mm/hr and CRP at 0.3/mg/dl.

**Conclusion:** This case report emphasizes that Takayasu's arteritis might be presented with hemoptysis as an initial symptom of the disease as a result of pulmonary artery involvement.

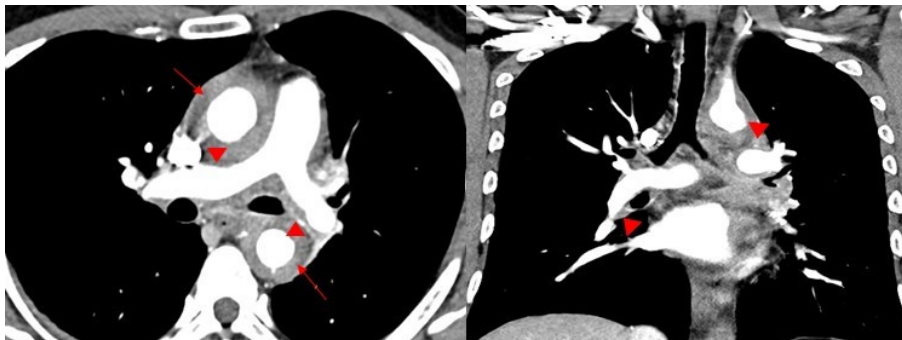


Figure 1. Chest CT shows wall thickening of ascending, descending aorta(arrows) and both pulmonary arteries(arrow tips).

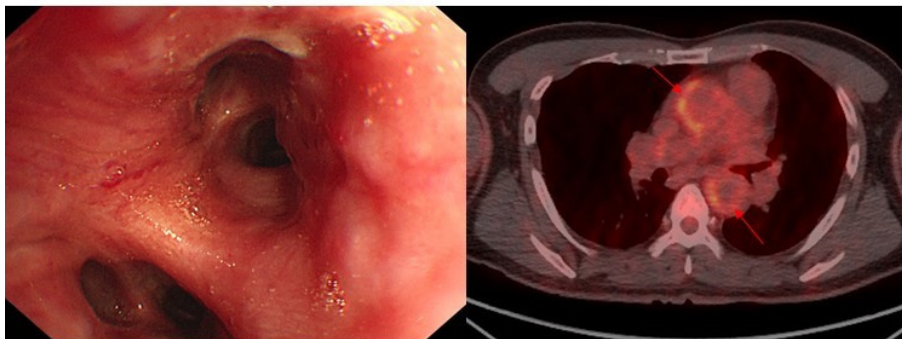


Figure 2. Bronchoscopy shows mucosal redness

Figure 3. PET CT shows Diffuse uneven hypermetabolic wall thickening along ascending aorta, and descending aorta(arrows).