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Hemoptysis due to bronchiectasis in a nonagenarian

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To the Editor,

A 90-year old man was admitted in the emergency room of our hospital for cough with hemoptysis. He reported fever lasting 48 hours and night sweats lasting 2 weeks. He mentioned a history of bronchiectasis for 5 years.

Based on this information, we performed a chest X-Ray, which showed alveolar opacities in the middle lung fields in both lungs. Arterial phase CT scan showed bronchiectasis in middle lobe and lingular and ground glass opacities caused by inhaling bleeding in the right middle lobe. CT also depicted 2 thick trunks of bronchial artery directly branching from the descending aorta and a thin one from the distal aortic arch. Serum level of albumin and C-reactive protein was 4.0 g/dL, 0.10 mg/dL, respectively. Both physical and cognitive function of the patient were judged to be indicated for embolization, the patient received the procedure. As a result, no pseudo-aneurysm nor extravasation of contrast medium was shown on selective arteriography of any trunk of bronchial artery. However, the branch of the thin trunk was distributed to the middle lobe on CT and we believed this thin trunk artery as responsible for hemoptysis. After embolization of this

trunk using mixture of glue and lipiodol, no hemoptysis was seen and this patient was uneventfully discharged.

Patients with bronchiectasis may present a large amount of hemoptysis during the course of the disease. The main cause of them is not massive bleeding but asphyxia. Hemoptysis appears as areas of ground-glass opacities in the pulmonary parenchyma and those of obstructive atelectasis due to blood in the bronchi. However, these are non-specific findings (1). Patients with massive hemoptysis due to bronchiectasis require a multidisciplinary therapeutic approach is needed, aimed at maintaining airway permeability, optimizing oxygenation, and achieving hemodynamic stability. Due to the considerable risk of complications, the final treatment of choice is embolization of the arteries feeding the lesion, or even lobectomy in cases of serious, refractory disease (2). We show herein a nonagenarian

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with bronchiectasis. To our best knowledge, this is the eldest case with these conditions. Modified Glasgow Prognostic Score, which is a prognostic factor assessment evaluated several diseases, was good, and the patient had neither comorbidities nor cognitive function requiring control (3). Hemoptysis, when secondary to bronchiectasis, should alert clinicians to this diagnosis, which is best confirmed with a CT scan. Arterial phase CT was useful for embolization treatment to detect bleeding point, origin of bronchial artery, and responsible branch for hemoptysis (4). With regard to the therapy for massive hemoptysis due to bronchiectasis, bronchial artery embolization is one of the option for them, but it is an aggressive conservative therapy and associated with high risk of vascular injury, paralysis due to cerebral artery or anterior vertebral artery embolism. Therefore, it should be performed only in fit elderly. Meanwhile, aggressive conservative therapy including bronchial artery embolization should be pursued.

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