

An impending rupture of the subclavian artery after chemoradiotherapy

Ruptura podklíčkové tepny hrozící po chemoradioterapii

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A 57-year-old man with a 20 pack-year smoking history was referred to our hospital complaining of left upper chest pain. The patient had no vascular malformations and no congenital anomalies leading to vascular disorders. He had no comorbid collagen disease that causes vasculitis. He had received left lower lobectomy 3 years ago due to adenocarcinoma of the lung. Two years ago, he received chemoradiotherapy for a recurrence of the left upper mediastinal lymph node. After that, he was receiving maintenance therapy with pemetrexed. At this time, physical examination was unremarkable. The *Treponema pallidum* hemagglutination test was negative. Contrast-enhanced CT showed an aneurysm of the left subclavian artery and

bleeding into the tumor (Fig. 1). He was taken to another emergency hospital and underwent surgical treatment. This treatment prevented rupture of the subclavian artery, but the patient had cerebral infarction and died 3 weeks after the onset of this complication. Autopsy was not permitted.

Aneurysm of the subclavian artery occurs rarely [1–4], and the rupture of the subclavian artery aneurysm is extremely rare [3,4]. Aneurysms are known to develop as a disease of the arteries themselves, but can occur as a result of lung cancer invading the arteries. It can also occur with effective chemotherapy or radiation therapy for lung cancer that has invaded the arteries, although the precise mechanism of the development of the aneurysm is not clear. Our patient complained of pain in the left anterior chest, which is presumed to have been associated with impending rupture. The pain was not necessarily severe, and knock pain was not observed. Very rarely, chest pain that appears in patients with vascular invasion treated with chemoradiotherapy may suggest the possibility of an impending rupture of the blood vessel in the differential diagnosis. The urgency should be evaluated together with the CT image.

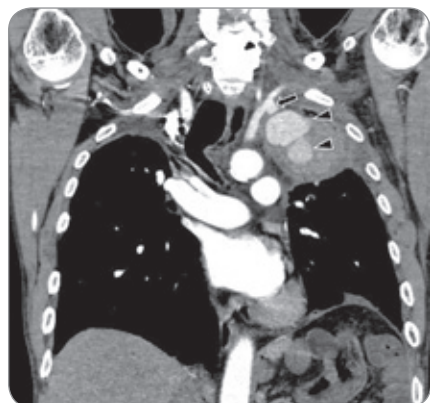


Fig.1. Contrast-enhanced CT showed an aneurysm of the left subclavian artery (arrow) and bleeding into the tumor (arrow head).

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