

Case	(221) Hemorrhagic infiltration surrounding the pulmonary arteries: an unusual complication of aortic dissection.
Authors	A. Corujo, S. Mazzini, L. Conde.
Centre	Hospital De La Santa Creu I Sant Pau.

CASE PRESENTATION

A 54-year-old male active smoker with an untreated hypertension arrived at the emergency room with oppressive chest pain, radiating to the neck, accompanied by cold sweat that began 4 hours ago.

With suspicion of acute aortic syndrome, a simple CT and synchronized CT angiography were performed, showing a Stanford type A aortic dissection extending from the aortic root to the iliac axes; with a probable intimal tear in the transition of the ascending aorta and the aortic arch.

As an unusual finding in the simple CT, there was minimal peripheral hyperdensity around the main and left pulmonary arteries. In the post-contrast study, the peripheral zone described above was a hypodense area that extended from the pulmonary trunk to the right and left pulmonary arteries and to the rest of the pulmonary arterial branches.

At the left lung parenchyma, ground-glass opacities with a peribronchovascular distribution and interlobular septal thickening were present, predominating in the upper lobe. The findings were compatible with an aortic rupture with blood extending around the pulmonary arterial vasculature, reaching the pulmonary interstitium.

DISCUSSION

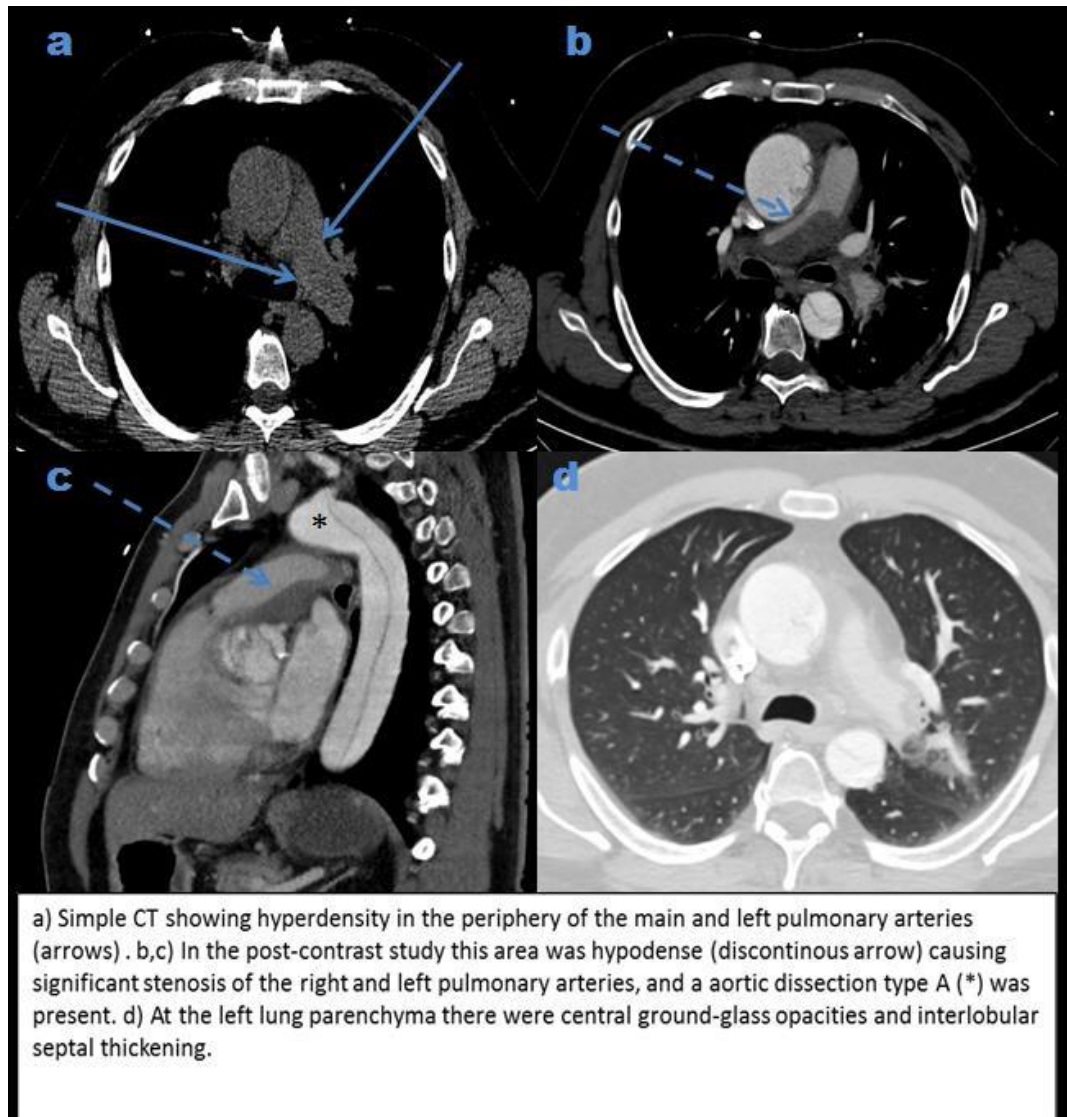
The risk of fatal aortic rupture in patients with untreated proximal aortic dissection is approximately 90%. The most frequent place in which ruptures take place (75%) are the pericardium, the left pleural cavity, or the mediastinum. (1)

The presence of blood dissecting the pulmonary arterial perivascular connective tissue is a rare complication of aortic ruptures secondary to aortic dissections type A (1,2), with the most frequent rupture site being the posterior wall of the ascending aorta. (1,2,3)

The blood spreads from the rupture site through a sheath of connective tissue that is common to the aorta and the pulmonary trunk, and sometimes it can progress around the pulmonary arteries reaching the pulmonary interstitium. (2,3) Because the intrapulmonary arterial pressure is low, the blood may narrow the lumen of the pulmonary main artery and its branches. (2,3)

CONCLUSION

The existence of hemorrhage around the pulmonary arterial vessels secondary to an aortic dissection is a rare sign of aortic rupture. Radiologists should be aware of this uncommon finding because of its implications on the patient's prognosis.



BIBLIOGRAPHY

- Castañer E, Andreu M, Gallardo X, Mata JM, Cabezuelo MA, Pallardó Y. CT in nontraumatic acute thoracic aortic disease: typical and atypical features and complications. *Radiographics*. 2003 Oct;23 Spec No:S93-110.
- Sueyoshi E, Sakamoto I, Uetani M, Matsuoka Y, Suenaga E. CT findings of ruptured intramural hematoma of the aorta extending along the pulmonary artery. *Cardiovasc Intervent Radiol*. 2007 Mar-Apr;30(2):321-3.
- Guilmette JM, Dennie C, Semionov A, Gahide G, Pressacco J, Fraser R. Hemorrhagic infiltration of the pulmonary artery connective sheath: a complication of acute aortic dissection. *ECR 2013, Educational Exhibit Poster N°C-1275*.