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Recognizing Intramural Hematoma of the Pulmonary Artery: A Warning Sign That May Precede Aortic Dissection

E-PAGE ORIGINAL IMAGE

A 53-year-old man presented to the emergency department with sudden onset of compressive chest pain. Thoracic computed tomography (CT) with intravenous contrast showed a dissection flap (Stanford type A, DeBakey II dissection) in the ascending aorta, extending from the sinotubular junction to the origin of the brachiocephalic artery (Figure 1). Computed tomography sections also showed a circumferential hypodense appearance extending from the pulmonary trunk to the lobar branches, narrowing the vessel lumen, which was evaluated as an intramural hematoma. The patient underwent isolated ascending aortic graft interposition, and post-treatment control intravenous non-contrast CT images showed no increase in density in the pulmonary artery wall that could be related to the hematoma.

Pulmonary artery intramural hematoma (PA-IMH) is a rare complication with unclear clinical implications.[1,2] In aortic dissection, the progression of hematoma to the pulmonary artery wall is explained by the commonality of the ascending aorta and pulmonary trunk adventitia layers.[2] If hyperdancing of the pulmonary artery wall is detected on non-contrast CT, PA-IMH and thus acute aortic dissection should be considered. In case of high clinical suspicion, PA-IMH may be helpful in the differential diagnosis of aortic dissection.

It should be noted that no AI-enabled technologies, such as big language models or chatbots, were employed in the production of this work.

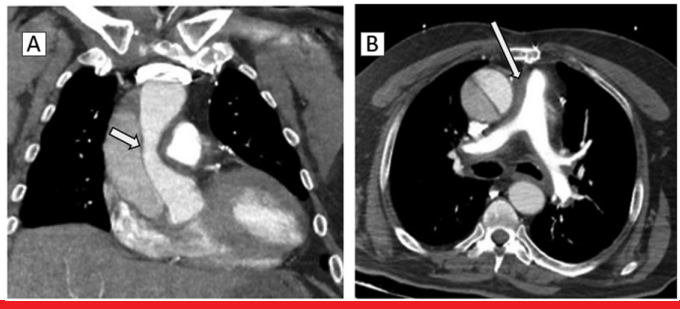

Figure 1. A: Coronal CT scan with intravenous contrast demonstrating a dissection flap traversing the ascending aorta and double lumen (arrow). B: Intravenous contrast-enhanced axial CT scan illustrating an intramural hematoma extending from the pulmonary trunk to the branches of the lobar arteries, manifesting as hypodense soft tissue narrowing the vascular lumen (arrow).

Informed Consent: The patient was informed about the details of the study and consent was obtained in accordance with the relevant ethical rules.

Declaration of Interests: The authors have no conflicts of interest to declare.

Merve Solak[1]
Nur Hürsoy[1]
Doğuş Hemşinli[2]

[1]*Department of Radiology, Recep Tayyip Erdoğan University, Rize, Türkiye*
[2]*Department of Cardiovascular Surgery, Recep Tayyip Erdoğan University, Rize, Türkiye*

Corresponding author:
Merve Solak
✉ mervesolak2555@gmail.com

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