

Clinical Image

Pulmonary Artery Pseudoaneurysms in Cannonball Metastases

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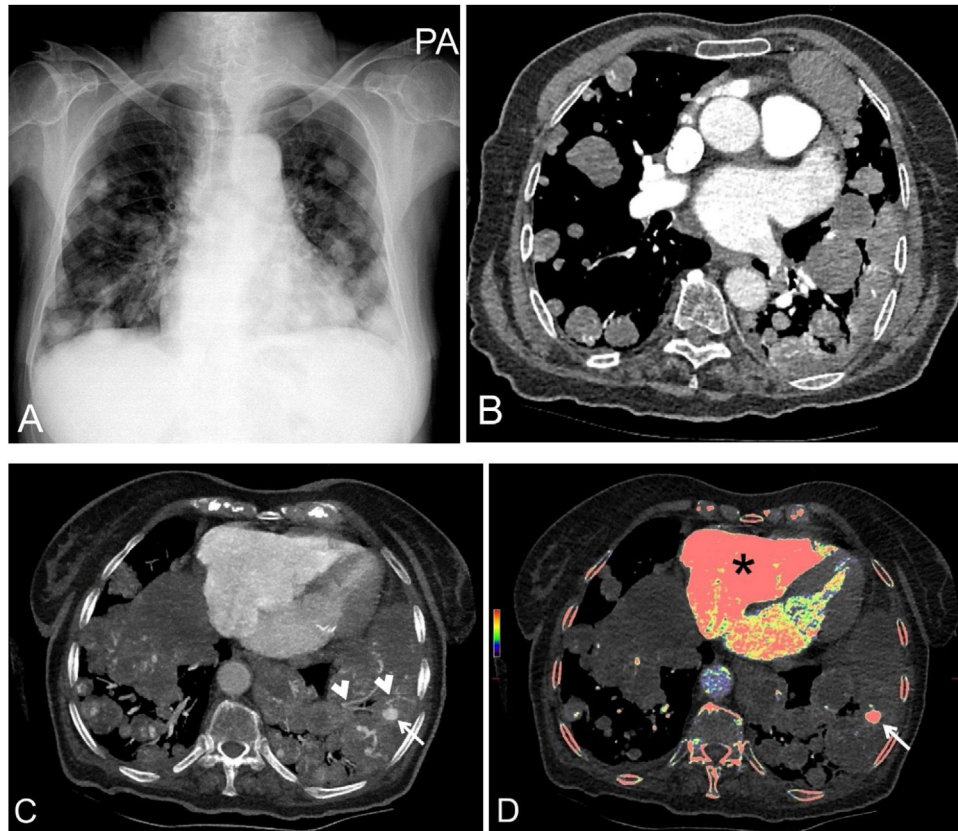


Fig. 1. (A, B) Cannonball metastases in both lungs on X-ray and thorax CT. (C) Maximum intensity projection image showing the largest pseudoaneurysm (arrow) and the terminal branches of the pulmonary artery (arrowheads). (D) The color intensity of the pseudoaneurysm indicated by the arrow in the color mapping obtained by thoracic CT fusion is the same as that of the right ventricle (*).

A 79-year-old woman with anaplastic carcinoma of the thyroid gland presented with hemoptysis for one week. X-ray and contrast-enhanced computed tomography (CT) of the thorax revealed multiple, well-circumscribed, rounded masses in all segments of both lungs, known as cannonball metastases (Fig. 1A, B). Most of these metastases contained pseudoaneurysms of varying sizes

associated with subsegmental pulmonary artery branches (Fig. 1C). The metastases were smaller and pseudoaneurysms were absent in the patient's CT scan 2 months earlier. Thoracic CT color fusion images confirmed that the pseudoaneurysms were located in the pulmonary artery branches (Fig. 1D). Maximum intensity projection image shows multiple intra-metastatic pulmonary artery pseudoaneurysms (Movie).

These round and well-circumscribed metastases in the lung are also known as cannonball metastases and these metastases are more frequently caused by urogenital system neoplasms such as

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renal cell carcinoma, choriocarcinoma, and endometrial cancer. Rarely, metastasis of thyroid malignancies has also been reported.¹ Pulmonary artery pseudoaneurysms are a life-threatening condition and their etiology includes infection, trauma, primary or metastatic lung malignancies, and vasculitis. Hemoptysis is the most common finding and mortality rates have been reported to be approximately 50% when ruptured.²

Authors' contributions

Esat Kaba: Designed the analysis, collected the data, and wrote the paper.

Merve Solak: Designed the analysis, collected the data, and wrote the paper.

Nur Hürsoy: Designed the analysis, collected the data, and wrote the paper.

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Conflict of interests

The authors declare that they have no conflict of interest in the publication of this article.

Appendix A. Supplementary material

Supplementary material associated with this article can be found in the online version available at <https://doi.org/10.1016/j.arbres.2024.01.010>.

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