Right extrapleural hematoma due to thoracic trauma. The extrapleural fat sign

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We report the case of a 54-year-old male presenting to the emergency department with dyspnea and right-sided chest pain following recent thoracic trauma. He had no significant medical history but showed progressive anemia.

A chest X-ray (Figure 1A) revealed right-sided rib fractures and an extensive ipsilateral opacity with extrapulmonary morphology. Chest CT scan (Figures 1B-D) showed a loculated, biconvex collection on the right side, with dependent areas of bleeding, separated from the lung parenchyma by a thin fat-density line (the extrapleural fat sign). These findings confirmed an extrapleural hematoma. The hematoma was successfully drained via a chest tube, leading to clinical improvement.

Extrapleural hematomas are rare, occurring in 7.1% of thoracic trauma cases. They result from bleeding between the parietal pleura and endothoracic fascia and are often associated with rib fractures, hemothorax, pneumothorax, and pulmonary contusions.[1]

The extrapleural fat sign, seen on CT, is a linear fat-density line separating the pulmonary parenchyma from extrapleural lesions. It corresponds to extrapleural fat thickened and medially displaced in extrapleural pathologies.[2]

Recognizing this sign is critical to differentiating extrapleural hematomas from hemothorax, as their management and complications differ.[1,2]

AUTHOR CONTRIBUTIONS

All of the authors equally contributed to the writing and reviewing of the manuscript.

CONFLICTS OF INTEREST

None declared.

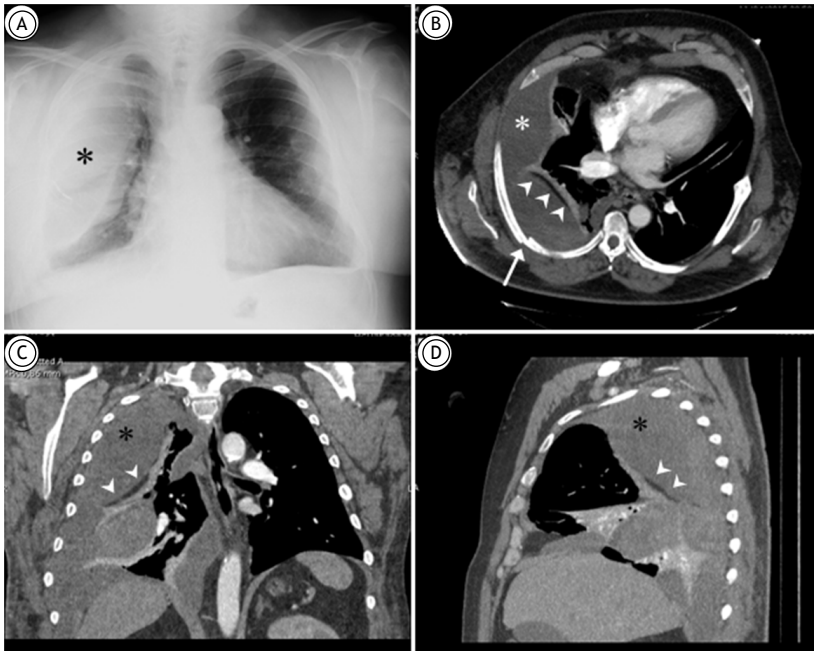

Figure 1. (A) Posteroanterior chest X-ray showing right rib fractures and a large extrapulmonary opacity (asterisk). Axial (B), coronal (C), and sagittal (D) reconstructions of chest CT scan (mediastinal window) reveal rib fractures (arrow) and a large extrapulmonary collection (asterisks) separated from the atelectatic lung parenchyma by a linear fat-density image (arrowheads) corresponding to the extrapleural fat sign, consistent with an extrapleural hematoma.

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