



Multifocal Thoracic Tuberculosis

Maher Abouda, MD, and Ferdaous Yangui, MD



From the Faculty of Medicine of Tunis, University of Tunis El Manar, El Manar, Tunisia; and the F.S.I. Hospital (Interior Security Forces Teaching Hospital), Rue Taher Ben Achour, Marsa, Tunisia.



Scan code to view additional images

A 44-year-old North African woman was admitted for a 4-month history of weight loss, dry cough, and back pain. Physical examination showed a temperature of 39°C and a 4-cm painless elastic mass in her right chest wall. Laboratory data showed lymphopenia ($552/\text{mm}^3$), high erythrocyte sedimentation rate (123 mm/h), and high C-reactive protein (162 mg/dL) with negative HIV test result. Anteroposterior chest X-ray showed a widening of the posterior mediastinum with increased prevertebral soft tissue shadow, alveolar opacity in the left upper lobe, and lytic lesion involving the sixth right rib anteriorly (Figure 1).

Tuberculin test and sputum smears for acid fast staining were negative.

The chest computed tomography scan revealed a chest wall collection in front of the sixth rib with bone destruction (Figure 2, A), large paravertebral fluid mass of soft tissue surrounding the vertebra, extending from T1 to T6 measuring 120 × 27 mm, destruction of vertebral bodies from T3 to T5 (Figure 2, B), and parenchymal condensation in the upper left lobe.

Magnetic resonance imaging of the spine showed thoracic paraspinal abscess with severe spondylodiscitis, diffuse spine destruction, and prevertebral sacral spine collection with

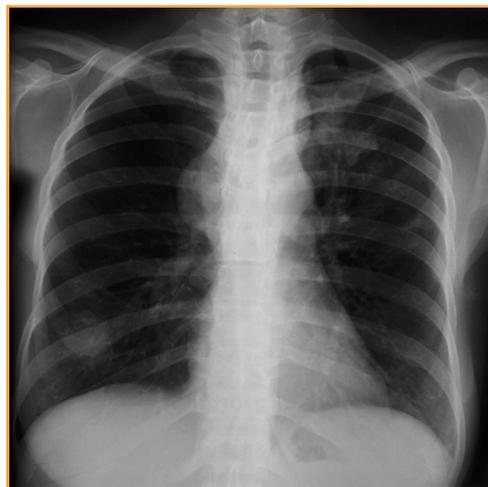


FIGURE 1. Chest X-ray showing alveolar opacity in the left upper lobe, a bilateral mediastinal enlargement, and bone destruction of the sixth right rib.

epidural abscess (Supplemental Figure, available online at <http://www.mayoclinicproceedings.org>). Bacteriological analysis of computed tomography-guided aspiration of the chest wall abscess confirmed the diagnosis of tuberculosis (TB). Anti-TB chemotherapy was started and led to clinical improvement within 2 months.

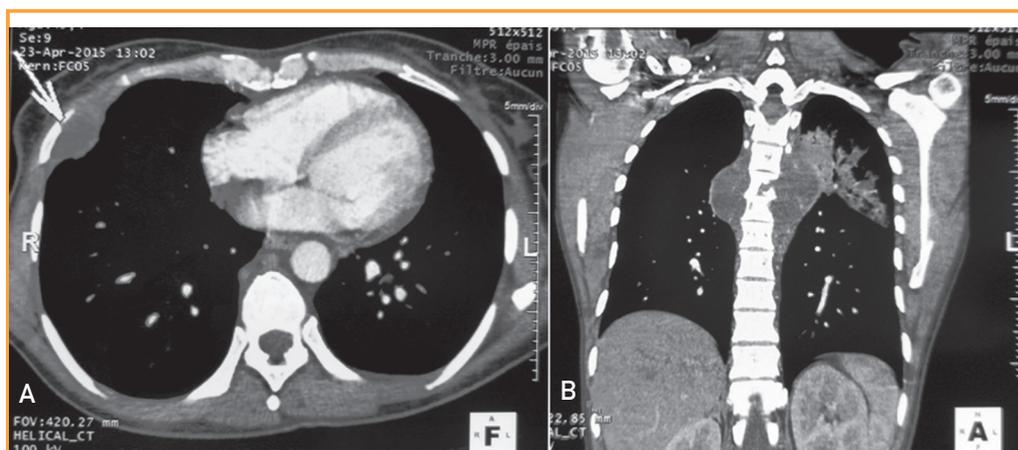


FIGURE 2. A, Chest computed tomography scan revealed an abscess of the right chest wall and B, paravertebral fluid mass along the prevertebral fascia, with multiple destructive lesions extending from T1 to T6.

Skeletal TB remains a frequent disease in developing countries, and represents 10% of extrapulmonary tuberculosis.¹ Among patients with skeletal TB, spinal and rib involvement accounts for approximately 50% and 5% of the cases, respectively.^{1,2}

Typical chest X-ray in thoracic spinal tuberculosis shows a posterior mediastinal mass.³ Rib TB can mimic a metastatic tumor with bone destruction. In such cases, lung nodules and condensate can provide an indication for the diagnosis of TB.

Computed tomography visualizes the discostebral lesions and paravertebral abscesses. Magnetic resonance imaging is the appropriate imaging examination in TB spondylitis due to its superior soft tissue resolution and multiplanar capability.

ACKNOWLEDGMENTS

We acknowledge the assistance of Mehdi Charfi, MD, Rimeh Ayari, MD, and Med Ridha

Charfi, PhD, in the preparation of this medical image.

SUPPLEMENTAL ONLINE MATERIAL

Supplemental material can be found online at <http://www.mayoclinicproceedings.org>. Supplemental material attached to journal articles has not been edited, and the authors take responsibility for the accuracy of all data.

Correspondence: Address to Maher Abouda, MD, Faculty of Medicine of Tunis, University of Tunis El Manar, Respiratory Department, F.S.I. Hospital (Interior Security Forces Teaching Hospital), Rue Taher Ben Achour, Marsa 2070, Tunisia (maherabouda@yahoo.fr).

1. Jutte PC, van Loenhout-Rooyackers JH, Borgdorff MW, van Horn JR. Increase of bone and joint tuberculosis in The Netherlands. *J Bone Joint Surg Br.* 2004;86(6):901-904.
2. Tatelman M, Drouillard EJ. Tuberculosis of the ribs. *Am J Roentgenol Radium Ther Nucl Med.* 1953;70(6):923-935.
3. Ansari S, Amanullah MF, Ahmad K, Rauniyar RK. Pott's spine: diagnostic imaging modalities and technology advancements. *N Am J Med Sci.* 2013;5(7):404-411.