Received: 10 January 2023 | Accepted: 6 February 2023

DOI: 10.1002/emp2.12916

JACEP OPEN
JOURNAL OF THE AMERICAN COLLEGE OF EMERGENCY PHYSICIANS OPEN
A GLOBAL JOURNAL OF EMERGENCY MEDICINE
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IMAGES IN EMERGENCY MEDICINE

Infectious Disease

Air-fluid level in the mediastinum

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1 | PATIENT PRESENTATION

A 19-year-old man presented to the emergency department with weakness, loss of appetite, and a weight loss of at least 13 kg in 5 months. He also complained of exertional dyspnea, dry cough, day and night sweats, and abdominal plus lower back pain. The physical examination revealed a temperature of 39.3°C but nothing else abnormal. The chest x-ray (Figure 1) revealed a mass that appeared to be located in the posterior mediastinum.

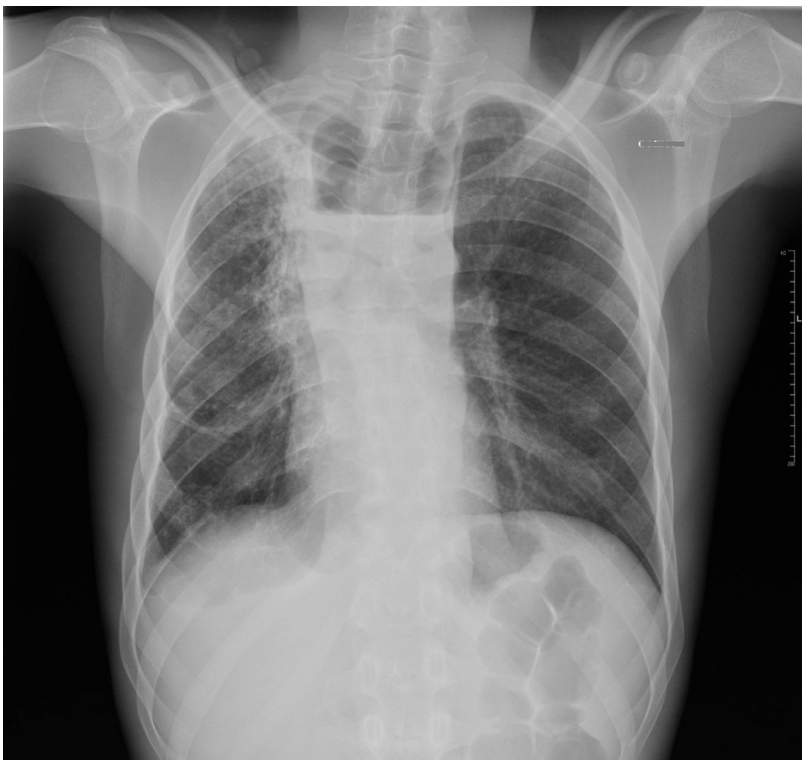

FIGURE 1 Chest X-ray revealing a posterior mediastinum mass.

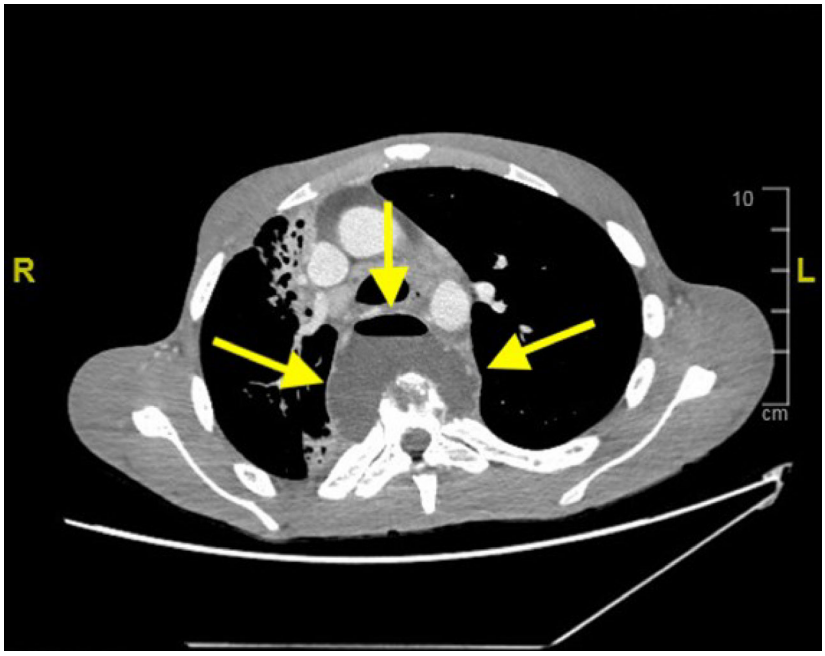

FIGURE 2 Computed tomography scan showing a perispinal collection from T1 to T12.

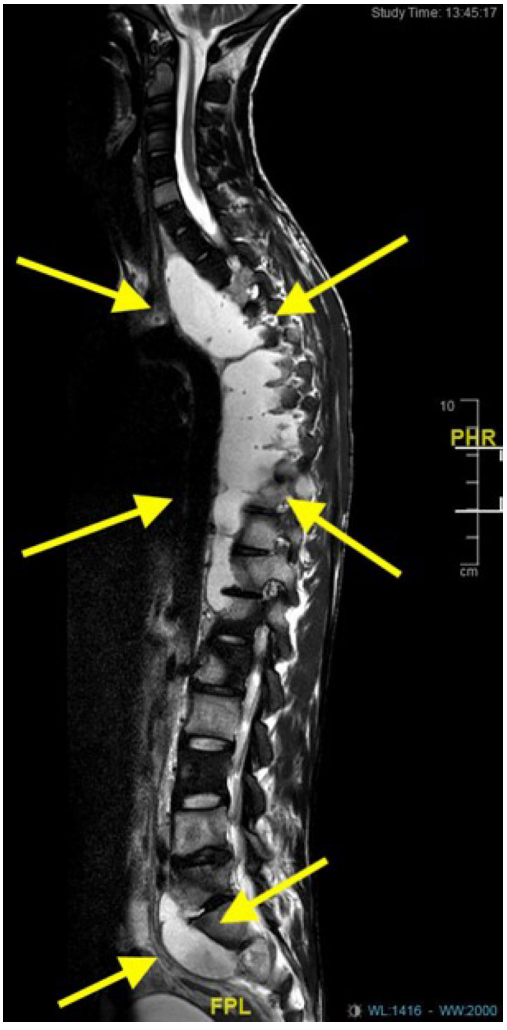

FIGURE 3 Magnetic resonance imaging exploring collections from T1 to T12 and from L5 to S2.

2 | DIAGNOSIS: POTT'S DISEASE WITH EXTENDED DOUBLE PERISPINAL COLLECTION

A computed tomography (CT) scan (Figure 2) was performed in the emergency department to assess the extent of the disease, which showed pulmonary tuberculosis and spinal osteomyelitis associated with a perispinal collection from T1 to T12 and from L5 to S2, suggesting Pott's disease.[1] The diagnosis of disseminated tuberculosis was confirmed by the presence of *Mycobacterium tuberculosis* in culture.[2] A quadri-therapy for tuberculosis was initiated with isoniazid, rifampicin, pyrazinamide, and ethambutol, then downgraded to a tri-therapy because of the absence of resistance at the antibiogram.[3] Magnetic resonance imaging (Figure 3) performed later during the hospitalization revealed a staged spondylodiscitis associated with collections from the beginning of the extension to the central nervous system. Echocardiography confirmed the presence of associated chronic pericarditis. Finally, the indication for radio-controlled drainage of the posterior mediastinal collection was decided owing to the important risk of fistulization.[4]

Tuberculosis is caused by slow growing aerobic bacilli, *Mycobacterium tuberculosis* complex. This disease, affecting mainly the lungs, also takes osteoarticular forms, the most frequent of which is spondylodiscitis. Spinal involvement is always secondary to hematogenous dissemination of *bacilli* from the primary site.[5] Pott's disease results from an infection of the vertebrae (spondylitis) and intervertebral discs (discitis) with *M. tuberculosis*. The intervertebral disc is a relatively avascular structure and is spared until late stage of the disease. Bone destruction in spinal tuberculosis can be fragmentary, osteolytic, subperiosteal, or localized destruction with sclerosed margins. Cold abscesses are pus collections that lack surrounding inflammatory response and are seen in nearly 70% of patients with spinal tuberculosis. This is a severe form of the disease, located near nerve structures,

which may be significantly and permanently affected, and may be life threatening.

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How to cite this article: Fremery A, Zappa M, Pujo J, Epelboin L. Air-fluid level in the mediastinum. *JACEP Open*. 2023;4:e12916. https://doi.org/10.1002/emp2.12916