ESPONDILODISCITE TUBERCULOSA: UMA ARMADILHA DIAGNÓSTICA NO SISTEMA MUSCULOESQUELÉTICO

DADOS DO CASO

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ABSTRACT

30-year-old man with low back pain, fever, and weight loss. Imaging revealed spondylodiscitis, confirmed by biopsy and molecular testing for tuberculosis. Early diagnosis of tuberculous spondylodiscitis is essential to prevent vertebral collapse, spinal deformities, and neurologic deficits.

CLINICAL HISTORY

A 30-year-old previously healthy man presented with progressive low back pain, intermittent fever, weight loss, and difficulty walking. He denied respiratory symptoms.

IMAGING FINDINGS

X-ray (Fig. 01) showed vertebral erosions at L2-L3 and loss of the left psoas outline. CT (Fig. 02) demonstrated lytic lesions in the L2-L3 endplates and paravertebral soft tissue thickening. MRI (Fig. 03) revealed low T1 and high T2 signal in the L2-L3 vertebrae, post-contrast enhancement of endplates and soft tissues, and a left paravertebral abscess extending into the psoas. Chest CT (Fig.04) additionally showed consolidation in the left upper lobe despite negative sputum smears.

DISCUSSION

Spinal tuberculosis (Pott's disease) remains an important cause of infectious spondylodiscitis in endemic regions[1]. It usually presents insidiously with nonspecific symptoms such as back pain, fever, and weight loss. The absence of pulmonary signs or positive sputum smears, as in this case, may delay diagnosis[2,3]. Acharya et al. (2024) emphasize that the combination of imaging-especially MRI and CT-with CT-guided biopsy remains the most effective and early approach for definitive diagnosis. Histopathology provides the fastest confirmation, while NAAT and culture often show low initial positivity [4].Imaging plays a central role: MRI is the most sensitive modality for early detection of marrow edema, abscesses, and soft tissue extension [2,3], while CT highlights bone destruction and is useful for guiding biopsies [2,3]. X-ray usually demonstrates more advanced changes such as vertebral collapse or obscuration of the psoas margin [2]. Typical features of spinal TB include anterior vertebral body involvement, relative disc sparing in early stages, multilevel spread, and the formation of large paravertebral abscesses with central necrosis and thin walls [2,3]. This contrasts with pyogenic spondylodiscitis, usually due to Staphylococcus aureus, which has an abrupt onset, early disc involvement, and more compact abscesses [3]. In our patient, biomechanical instability and early deformity indicated the need for surgical stabilization in addition to antitubercular therapy [2]. The goals of surgery include radical debridement, neural decompression, deformity correction, and spinal stabilization. Recent reviews highlight the growing trend toward minimizing surgical morbidity while maintaining effectiveness[5]. If untreated, spinal TB may progress to vertebral collapse, kyphotic deformity, spinal cord compression, and neurological deficits such as radiculopathy or paraplegia[2].

DIFFERENTIAL DIAGNOSIS

- Pyogenic spondylodiscitis;
- Vertebral metastasis;
- Retroperitoneal sarcoma;
- Lymphoma;
- Brucellosis;
- Actinomycosis.

TEACHING POINTS

Spinal tuberculosis may present subtly, without pulmonary signs. In such situations, imaging and CT-guided biopsy with histopathology are indispensable for early and accurate diagnosis, guiding prompt therapy and preventing severe complications.

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IMAGES

Fig 01. Anteroposterior and lateral lumbar spine radiographs:
Irregularity and erosions of the L2 and L3 vertebral endplates, with mild loss of intervertebral disc height. Bilateral psoas muscle margins are obscured, suggesting paravertebral soft tissue involvement. Findings raise suspicion for spinal infection, later confirmed as tuberculous spondylodiscitis.

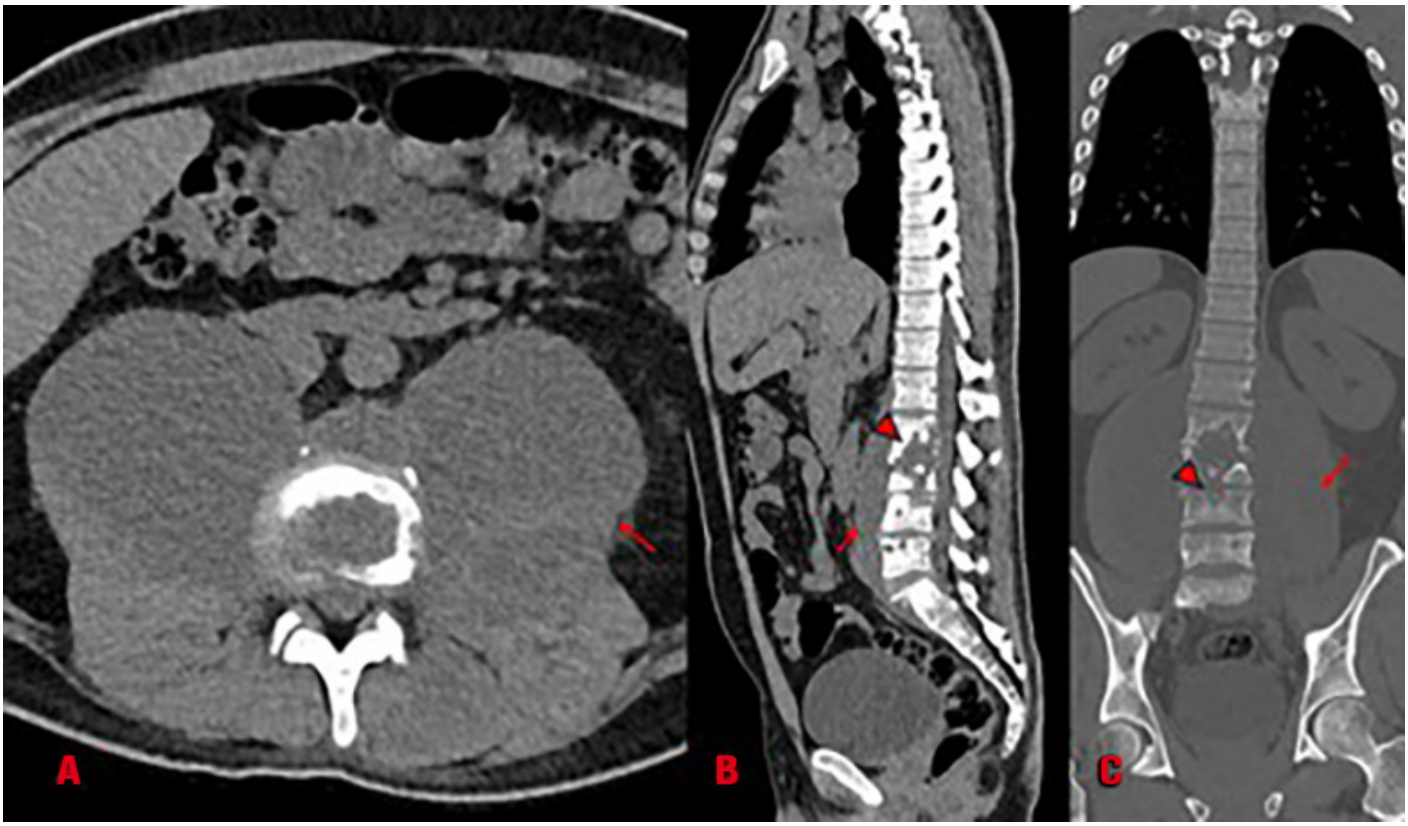

Fig 02: Non-contrast Computed Tomography of the Lumbar Spine - Axial (A), Sagittal (B), and Coronal (C) Reconstructions: Bone erosions involving the opposing endplates of L2-L3 (arrowhead), associated with fusiform paravertebral soft tissue thickening extending along the lumbar spine (arrows). Findings are suggestive of spondylodiscitis with likely paravertebral abscess formation.

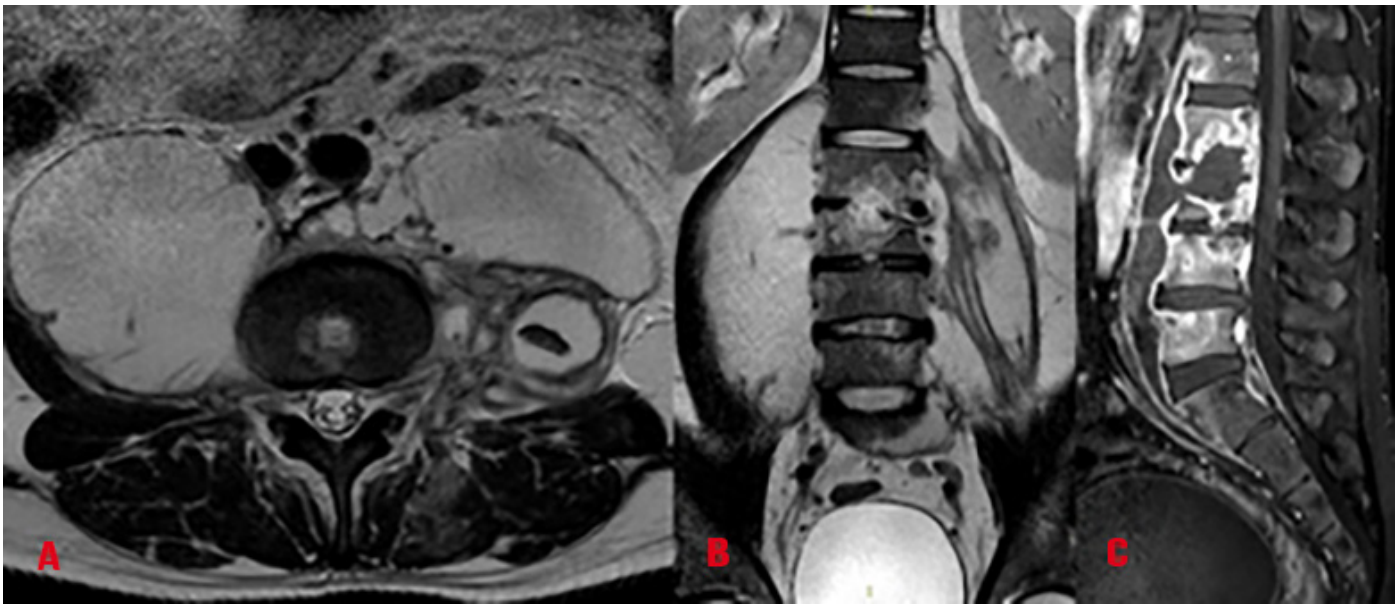

Fig 03. Magnetic Resonance Imaging of the Lumbar Spine - axial (A) and coronal (B) T2-weighted images, and sagittal (C) T1-weighted fat-suppressed post-contrast image:
Fusiform paravertebral soft tissue thickening with heterogeneous enhancement and central areas of non-enhancement (suggestive of necrosis) on post-contrast imaging (C), associated with hyperintense signal on T2-weighted images (A, B). Bone erosions are noted at the opposing endplates of L2-L3 with involvement of the adjacent disc. These findings are compatible with spondylodiscitis complicated by paravertebral abscess.

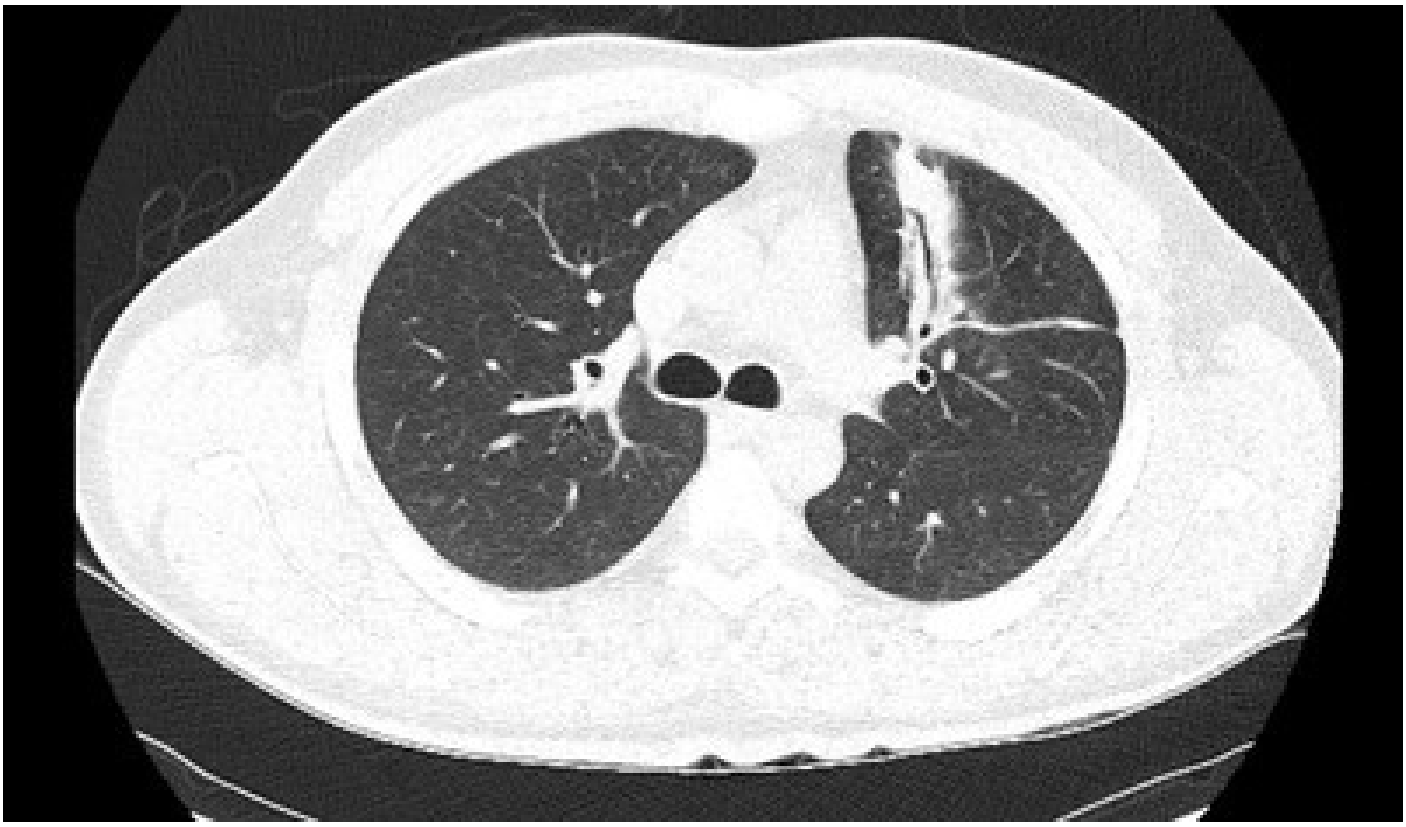

Fig. 04. Axial chest CT (lung window):
An area of consolidation with air bronchograms in the anterior/apicoposterior segment of the left upper lobe.