

Dorsolumbar Pain and Supraclavicular Adenopathies in a 67 Year Old Male

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Clinical Case

A 67-year-old male, who had smoked up to 20 cigarettes daily up until 2 years ago, was diagnosed with atrial paroxysmal fibrillation. He had presented dorsolumbar pain for 5 months, which irradiated to the iliac fossae and the right flank without any urinary, digestive, or respiratory symptoms.

He improved partially upon treatment with non-steroidal anti-inflammatory drugs (NSAID) and in the 2 weeks prior to his hospitalization a dysthermic sensation was added to the general malaise.

Upon physical exploration we found fever (37.5°C), multiple adenopathies in both supraclavicular regions, especially the right one where a indurated, mobile, and painful adenopathic conglomerate can be palpated measuring 3 × 2 cm. He also presented pathologic adenopathies in both axillae. The abdomen was painful upon palpation localized to the right flank, without any peritoneal signs. No hepato-splenomegaly was documented. Some of the last dorsal vertebrae were painful upon percussion.

Complementary testing showed, in the hemogram: leucocytes, 7580/μL; neutrophils, 72.5%; hemoglobin, 9.3 g/dL; hematocrit, 28.3%; MCV, 103.2 fL; MCH, 34 pg; MCCH, 33.1 g/dL; platelets, 288 000/μL; ESR, 109; fibrinogen, 594 mg/dL; C reactive protein, 82.4 mg/L. In the blood chemistry: glucose, 112 mg/dL; urea, 35 mg/dL; creatinin, 1 mg/dL; uric acid, 5.1 mg/dL; cholesterol, 174 mg/dL; triglicerides, 96 mg/dL; total protein, 8 g/dL; albumin, 3.1 g/dL; calcium, 8.7 mg/dL; sodium m, 137 mmol/L; potassium, 4.2 mmol/L; LDH, 343 U/L; GPT (ALT), 19 U/L; GOT (AST), 19 U/L; alkaline phosphatase 104 U/L; TSH, 3.62 μU/mL; free T4, 1.16 ng/dL; vitamin B₁₂, 501 pg/mL; folic acid,

5 ng/mL. Chest x-ray did not show any infiltrates. x-rays of the dorsolumbar spine showed chronic changes. The computerized tomography (CT) showed pathological supraclavicular adenopathies (Figure 1), as well as in the mediastinum, right hylum, splenic hylum, and celiac trunk; some of them with a hypo dense center. A pericardic effusion without lung lesions was also seen. A splenic, hypodense space occupying lesion (SOL) was also seen, as well as a lesion in the intervertebral space of D10-D11 (Figure 2) that affected the contiguous zone of both vertebrae.

Evolution

A fine needle aspiration (FNA) of the right supraclavicular adenopathic mass was carried out, finding a necrotizing lymphadenitis without any alcohol-acid resistant bacilli (AARB). Mantoux testing was 20 mm. Afterwards, the adenopathy were the AARB were observed and the Lowenstein culture was positive, identifying *Mycobacterium tuberculosis*. Sputum and urine bacilloscopies were negative. A magnetic resonance (MR) of the dorsolumbar spine was done which found evidence of spondylodiskitis that affected D10 and extended to the underlying disk and the superior part of D11, probably granulomatous by its characteristics, with a soft-tissue mass found epidurally, as well as spinal cord compression and secondary compressive myelopathy (Figures 3 and 4). The serology for the Human Immunodeficiency Virus (HIV) was negative.

Disseminated tuberculosis was diagnosed (lymphatic, pericardic, splenic, and spondylodiskitis) and anti-tuberculosis treatment was started with isoniazide, rhyphampin, and pyrazinamide for 6 months, with a good response that excluded the need for back surgery.

Commentary

Disseminated tuberculosis is defined as a clinical situation in which there is simultaneous tuberculous affection of 2 or more organs that are non-contiguous. It is usually

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Figure 1. Computerized tomography of the larynx and neck: adenopathies of a pathologic size (arrows) are seen in both supraclavicular regions, somewhat more evident on the right side (some are 3 cm and have a necrotic center).

Figure 2. Thoraco-abdominal computerized tomography that shows an alteration in the bone density of the vertebral body of D10 with a probable disruption of the right anterolateral cortex and a small component of associated soft-tissue.



Figures 3 and 4. Magnetic resonance of the spinal column in which a central lesion in D10 can be observed and which is barely extended to the posterior elements, with areas of vertebral destruction and partial collapse, with an extension of the signal alterations on the inferior intervertebral disk, focal rupture of the cortex of the upper surface of D11, and an extension into the subjacent vertebral spongy bone. An important mass of soft-tissue is found associated to this, in a perivertebral localization with an extension to the epidural space, especially anteriorly but also laterally to the right and extended to the intervertebral foramina, more evident on the right side. There is secondary spinal cord compression, with an alteration of the cord signal due to associated myelopathy.

produced by hematogenous dissemination and can present in both a millitary form and a non-millitary form.¹ Among the most frequent localizations of extrapulmonary tuberculosis, in order of frequency one can find lymph

node affection, pleural, kidney, and osteoarticular, though any organ can be affected.² In tuberculous lymphadenitis, the affection of the cervical and supraclavicular lymph nodes is the most frequent one,

though adenopathy can be found in other areas: inguinal, axillary, mediastinum, or mesenteric. Upon physical exploration one finds large-sized and firm lymph nodes that if are not treated can evolve into spontaneous fistulization.³ Radiologically the CT shows a low central density adenopathy (suggesting necrosis) with peripheral enhancement, that even though not a pathognomonic sign, it is very suggestive.⁴

The vertebral spine is the most frequently affected bony territory by tuberculosis in the form of spondylodiskitis, known basically as Pott's malady; high lumbar localization or low dorsal is the most frequent. It is currently a very infrequent disease; in Spain several retrospective reviews have been carried out where cases diagnosed in the last 15-20 years were included, finding between 20 and 80 patients.⁵⁻⁷ It is usually the consequence of dissemination from another source, even when the latter is not always apparent. Clinically, it is usually manifested as a subacute or chronic disease in which pain is the predominating syndrome, and in biochemical parameters with an elevated erythrocyte sedimentation rate.

Imaging techniques (CT and MR)⁸ allow us to establish clearly the type of affection that is presented: spondylodiskitis, characterized by the destruction of 2 or more contiguous vertebrae, as well as intervertebral disk affection (as was our case) or spondylitis without disk affection, apart from establishing if there are collections of pus in other zones (such as paravertebral, epidural, or psoas abscesses) and if there is or isn't any associated spinal cord damage.⁹

A definite diagnosis is usually established with the finding of AARB in a determined sample. In those cases in which a vertebral lesion coincides with another, more accessible source (lung or lymph node) the diagnosis is established through the determination of AARB in sputum or in the

lymph node. On the contrary, when the only visible source is the spine, one is obliged to do a CT guided FNB. Up to 50% of the obtained samples are positive for AARB and Lowenstein culture is positive in up to 70% of cases.⁵⁻⁷ Once the diagnosis is established, the usual conduct is medical treatment¹⁰ with 3 anti-tuberculosis drugs (isoniazide, rifampin, and pyrazinamide) for 6 months, though some authors recommend taking treatment to 9-12 months. The need for orthopedic surgery¹¹ must be proposed to patients with a neurological deficit or incapacitating anatomical problems.

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