

Chronic thoracic spine pain

Sunday, 01 August 2004

A 49-year-old woman complaining of thoracic spine pain for 18 months was admitted to the hospital for evaluation. The pain was accompanied by profuse sweating but she did not report any fever.

Physical examination revealed tenderness of the affected area on percussion, as well as pain and limitation of motion.

Erythrocyte sedimentation rate (ESR) was 86 mm (first hour). Chest x-ray showed destruction of the lower part of the body of the eighth thoracic vertebra. Magnetic resonance imaging of the thoracic spine showed pathology of the T8-T9 intervertebral disk and destruction of the T8 vertebral body (Figure 1). Computed tomography scan-guided fine needle aspiration of the affected disc was performed. Gram stain and culture of the obtained specimens for common microorganisms and *Brucella* species were negative. Serology tests for brucellosis were also negative. In addition, Ziehl-Neelsen stain, polymerase chain reaction (PCR), and culture for *Mycobacteria* were negative. Because of continuing symptoms and lack of diagnosis the patient underwent a vertebrectomy and substitution of the eighth thoracic vertebra with Moss titanium cylinder filled-up with auto-bone grafts. The stabilization was completed using the Kaneda system (Figure 2).

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Differential diagnosis

Differential diagnosis includes infectious spondylodiscitis (pyogenic, brucellar, tuberculous, mycotic, protozoan), neoplasms of the spine (primary or metastatic), spondyloarthropathies (ankylosing spondylitis, reactive arthritis, psoriatic arthritis), Paget disease, and hematologic neoplasms (chronic leukemias, multiple myeloma).

Diagnosis

Tuberculous spondylodiscitis (Pott's disease). Culture of the extracted bone grew *Mycobacterium tuberculosis*, which was resistant to isoniazid and rifampin.

Therapy

The patient was treated with pyrazinamide 1500 mg, ethambutol 1200 mg, streptomycin 1 gr, ofloxacin 800 mg, cycloserine 750 mg and vitamin B6 62,5 mg per day. Her symptoms gradually receded. Streptomycin was discontinued after two months of treatment. The rest of antituberculous agents were discontinued five months after initiation of treatment due to severe drug-related hepatotoxicity and psychosis. After treatment discontinuation all adverse reactions subsided. Four and a half years later the patient continues to be free of symptoms and with normal ESR without taking any medications.

Teaching points

- The involvement of the intervertebral disc favours the diagnosis of an infectious process and not a neoplastic disease.
- Our patient presented with the challenges of the management of spondylodiscitis. Persistent and even invasive diagnostic work up is needed for the proper and prompt management of these patients. Even then percutaneous approaches to obtain material from the infectious area have a sensitivity of 72% though specificity reaches 94% [1].
- Multidrug resistant tuberculosis is an important emerging threat to human health globally [2-4]. In vitro drug susceptibility testing may be necessary for all *Mycobacterium tuberculosis* isolates due to the increasing incidence of multidrug resistant strains worldwide. This is particularly so, as inadequate treatment may lead to increasing resistance [5].
- Psychosis has been an established possible complication of cycloserine and isoniazid treatment. Less often

ethambutol, quinolones, and rifampin have been reported to cause psychosis.

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Acknowledgments

- This case was prepared for our website by P. Rafailidis, MD and P. I. Vergidis, MD.
- We thank I. Avramopoulos MD, G. Sapkas, MD, and I. Xinotroulas, MD, for their contribution in the management of the case.