Clinical picture

Pott’s kyphosis

A 61-year-old male presented with a 2-year history of increasing back pain that particularly worsened when standing and walking. He complained of back pain and kyphotic deformity for more than 30 years. His medical history was non-significant other than spinal tuberculosis. He had no history of trauma and corrective surgery for kyphosis. The physical examination showed rigid kyphosis in the thoracolumbar region. Active and passive low back range of motion was limited and painful. The neurological examination was normal. Computed tomography (CT) scan showed severe kyphosis with involvement of the T12 and L1 vertebrae (Figure 1a). Magnetic resonance imaging (MRI) demonstrated obvious kyphosis resulting from significant destruction of two contiguous vertebral segments (T12 and L1 vertebrae) at the thoracolumbar junction (Figure 1b).

Spinal tuberculosis is estimated to occur in 1–5% of all tuberculosis cases. It is the most common cause of kyphotic deformity in many parts of the world. The severity of deformity in spinal tuberculosis depends on the extent of vertebral destruction, the level of lesions and the age of patients. Thoracic and thoracolumbar lesions have a significantly higher degree of deformity at presentation and are more likely to progress than lumbar or lumbosacral lesions. Patients with spinal tuberculosis treated conservatively have an average increase of 15° in deformity and 3–5% of the patients may develop with a deformity greater than 60°, which can lead to painful costopelvic impingement, secondary cardiorespiratory problems, late-onset paraplegia and consequent reduction in quality and length of life. Unfortunately, surgical correction of established kyphosis is difficult and hazardous with a high rate of complications. Therefore, prevention of kyphosis should be the primary aim of any treatment schedule for spinal tuberculosis.

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References


Figure 1. (a) Three-dimensional (3D) reconstructed CT scan showing the thoracolumbar lesions in the T12 and L1 vertebrae with a 105° kyphotic deformity and the T12 vertebra fused with the L1 vertebra. (b) T1-weighted sagittal MRI showing a kyphotic deformity at the thoracolumbar junction and collapse of the T12 and L1 vertebrae without spinal cord compression.