Isolated tuberculosis of the patellar tendon

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Among the variety of differential diagnoses for chronic patellar tendinopathy, isolated tuberculosis is extremely rare. We report such a case, without any evident primary contiguous or distant focus, in a 31-year-old immunocompetent male.

Extrapulmonary infection with Mycobacterium tuberculosis has many presentations, of which musculoskeletal involvement accounts for between 10% and 19% of cases.1 Tuberculosis (TB) can affect any bone, tendon or joint. The spine is the most common bony structure involved2 and tenosynovitis, or bursitis, accounts for only 1% of cases.3 The knee is affected in approximately 8% of cases and the patella in less than 0.1%.4

We report the clinical features, radiological findings, treatment and outcome of a patient who presented with isolated tuberculosis involving the patellar tendon. The diagnosis was missed initially. To our knowledge, this is the first such case in the literature.

Case report
In July 2000, a 31-year-old man of Indian origin presented with a two-year history of left anterior knee pain. He had persistent symptoms despite receiving many forms of conservative treatment, including physiotherapy, anti-inflammatory drugs and rest. His past medical history was unremarkable although his sister had suffered from pulmonary tuberculosis. There was no history of trauma, local injections, intravenous drug abuse or blood transfusion. There was no history of infection or of antibiotic therapy in the last two years. He had no systemic symptoms and was otherwise healthy. He did not suffer from any immune disorder.

Examination of the knee showed a full range of movement with normal patellar tracking. There was no swelling or effusion. There was tenderness over the patellar tendon.

Laboratory tests including full blood count, erythrocyte sedimentation rate, urea and electrolytes, liver function tests, hepatitis A, B and C serology, autoantibody screening and enzyme-linked immunoassorbtent assay for HIV were normal.

Radiographs of the chest and knee were normal. A tuberculin skin test was negative. An MR scan (Fig. 1) of the left knee showed a lesion in the patellar tendon taken six months before surgery. There is altered signal intensity within the proximal patellar tendon (large arrow) and sagittal thickening (arrowheads). There is also loss of definition of the posterior tendon border (small arrows).

Fig. 1

MRI of the left knee showing tendinopathy of the patellar tendon taken six months before surgery. There is altered signal intensity within the proximal patellar tendon (large arrow) and sagittal thickening (arrowheads). There is also loss of definition of the posterior tendon border (small arrows).
300 mg; Rifampicin, 450 mg and Pyrazinamide, 1500 mg for three months, followed by Isoniazid, 300 mg and Rifampicin, 450 mg for a further nine months.

The symptoms resolved unremarkably and when last reviewed four years post-operatively, he was fully active and walked normally with a Lysholm score of 98.6

Discussion
Tuberculous tendinopathy is rare and may follow direct inoculation or haematogenous spread from a primary focus such as the lung. The tendons of the wrist and hand are most frequently affected7 and involvement of the lower extremities is rare.8

The diagnosis of tuberculous tendinopathy is challenging because of its protean presentation, rarity and non-specific clinical signs which suggest other causes such as post-traumatic, malignant or other inflammatory diseases.2,8,9 Our patient demonstrates these difficulties and the case highlights three points. First, current screening tests can miss the diagnosis of TB, secondly, histological examination is essential, and, thirdly, patients with persistent anterior knee pain require further investigation to avoid delay in diagnosis.

References