Clinical picture

Tuberculous muscle abscess

A 45-year-old woman presented with subacute pain and swelling of the left thigh for 3 weeks. She reported body weight loss in the past 2 months and had no history of trauma, arthritis or back pain. Physical examination revealed a temperature of 37.8°C and left thigh swelling with localized heat and tenderness. Her white blood cell count was 3100/µl and erythrocyte sedimentation rate was 78 mm/h. Serial blood cultures were negative. Chest radiograph showed no abnormal infiltration or opacity. Computed tomography (CT) revealed cystic lesions involving left rectus femoris muscle (Figure 1). High-resolution ultrasound demonstrated hypoechoic change and loss of feather texture of left rectus femoris muscle with anechoic fluid collections. The ultrasound findings were consistent with myositis with abscess formation. Ultrasound-guided needle aspiration of the muscle abscess was done and microscopic examination of the fluid sample revealed acid-fast organisms. Fluid culture for mycobacterium yielded *Mycobacterium tuberculosis*. Treatment with rifampin, isoniazid, ethambutol and pyrazinamide, in combination with repeated needle aspirations, resulted in a rapid reduction in thigh pain and swelling. Tuberculosis involvement of skeletal muscle is uncommon, occurring in 1–2% of tuberculous cases. *Mycobacterium tuberculosis* may spread to muscle by either direct extension from adjacent source (e.g. an infected joint, bone, tendon or lymph node) or via bacteremia. The most common site is tuberculous psoas abscess resulting from extension of vertebral osteomyelitis.\(^1\) Primary extra axial muscular tuberculosis is even rarer, with few case reports and small case series in the literature. Such cases typically present with gradual onset of pain following localized swelling. Ultrasound provides a valuable method for detection of soft tissue abscesses or adjacent bursitis, tenosynovitis and arthritis.\(^2\) Characteristic ultrasound findings include muscular fibers displaced by infiltrating fluid and focal fluid accumulation. In addition, ultrasound-guided aspiration can rapidly obtain material for microbiological examination and can be used for therapeutic drainage.\(^3\)

![Figure 1. CT demonstrating lobulated and septated cystic lesions involving the left rectus femoris muscle.](image-url)
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References