## Isolated tuberculous pyomyositis in a renal transplant patient

Sir,

The risk of developing tuberculosis is increased considerably in renal transplant patients (0.4–1.7%) [1,2] compared with the general population (5.4 new cases per 100 000 population/year) [3]. Moreover, the symptoms and signs of infection are often masked by immunosuppressive agents, such that the disease is often disseminated at the time of diagnosis [4,5]. We describe a case of a renal transplant recipient who developed isolated tuberculous pyomyositis, that required repeated biopsies for diagnosis.

*Case.* A 69-year-old Latvian woman (who had lived in Australia for 50 years) presented to hospital with a 1-week history of lethargy and painful swelling of the left thigh and a 2-day history of fevers and rigors. She denied experiencing any weight loss, night sweats, or respiratory, intestinal, or joint symptoms. Seven months previously, she underwent cadaveric renal transplantation for end-stage renal failure secondary to analgaesic nephropathy. Her post-operative course had been unremarkable and her immunosuppressive therapy at the time of admission included cyclosporin 100 mg bd, mycophenolate mofetil 1 g bd and prednisolone 6 mg mane. She did not recall any previous tuberculous exposure nor BCG vaccination, and did not receive a Mantoux test prior to transplantation. Examination revealed low-grade pyrexia (38°C) and mildly tender swelling of the anterior left thigh only. A full blood count and multiple biochemical analysis, including creatinine kinase, were normal. C-reactive protein was elevated at 64 mg/l. A chest radiograph revealed clear lung fields. Urine microscopy was unremarkable and a urine culture and three sets of blood cultures were negative. Ultrasound and magnetic resonance imaging of the left thigh revealed diffuse subcutaneous oedema and extensive oedema of the quadratus, adductor and pyriformis muscles without any focal collections (Figure 1). Fine needle biopsy of the affected muscles demonstrated necrotic tissue and occasional leucocytes; but stains and cultures for bacteria, fungi and mycobacteria were negative. The patient was treated empirically with intravenous flucloxacillin and gentamicin for 10 days. Despite resolution of her muscular pain, the swelling and fevers persisted, prompting a repeat final needle aspirate. Several acid-fast bacilli were identified on Ziehl–Neelsen staining and *Mycobacterium tuberculosis* was subsequently cultured. A gallium scan was normal apart from focal uptake within the soft tissues of the left thigh. She was treated with rifampicin 600 mg daily, isoniazid 300 mg daily, ethambutol 900 mg daily and pyrazinamide 1.5 g daily, which resulted in a complete resolution of her symptoms and signs within a fortnight. Her cyclosporin was ceased and she has remained well after 10 months.

*Comments.* Tuberculous pyomyositis is a very rare condition that has previously been described in both immunocompetent and immunosuppressed individuals [6,7]. The infection usually involves a single large muscle, most commonly the quadriceps femoris, either by direct extension from a nearby focus or by haematogenous spread [6]. However, in contrast to previous reports, the present case was unique in that no pulmonary source of infection was able to be identified. Therapy for tuberculosis in renal transplant recipients does not differ from standard therapy, although a longer duration is advocated [1,2]. Immunosuppressive therapy does not invariably require reduction or cessation for successful treatment of tuberculosis if appropriate therapy is instituted promptly [2]. In this case, a decision was made to cease cyclosporin and continue only with prednisolone and mycophenolate mofetil, given the seriousness of her infectious complication, the difficulty of maintaining adequate cyclosporin levels on rifampicin and the generally decreased requirements of elderly patients for anti-rejection treatment as a result of reduced immune competence [8].

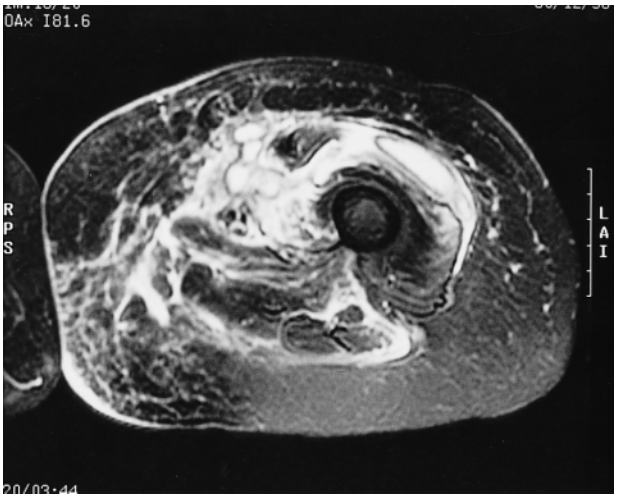


**Fig. 1.** Magnetic resonance imaging scan of the patient's left thigh revealing extensive muscular and subcutaneous oedema.

This case highlights the need to maintain a high index of suspicion for mycobacterial infection in immunosuppressed patients with persistent fever and musculoskeletal symptoms, despite the absence of disease elsewhere (including the lungs). Soft-tissue swellings in such circumstances should be examined with smears and cultures for mycobacteria and should be repeated if initially inconclusive.

Department of Renal Medicine David W. Johnson
Princess Alexandra Hospital Karen A. Herzig
Brisbane
Australia

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