Background: Infectious (tropical) pyomyositis is an acute, potentially life-threatening bacterial infection of skeletal muscles. It is endemic in tropical areas (hence the name). Despite this condition being relatively uncommon in temperate climates, it is on the rise and is most commonly seen in immunocompromised patients. The onset of pyomyositis is usually insidious, typically presenting as a focal muscle infection, and carries significant morbidity without antibiotic treatment. Staphylococcus aureus is cultured from an affected muscle in 75% of non-tropical cases. It usually arises from haematogenous spread. In spite of extensive muscle involvement, raised serum creatine kinase levels are paradoxically atypical. Only limited data are available regarding the diagnosis and management of this condition.

Methods: We present a case of a patient with S. aureus pyomyositis, who was successfully treated with linezolid. A 68 year old man presented with a seven day history of pain and weakness in both thighs, proximal myopathy, weight loss and night sweats. He had been on 15 mg prednisolone for the previous 6 months for PMR. Upon examination, he had swollen tender palpable quadriceps muscles bilaterally; the weakness was particularly evident in the hip flexors and knee extensors. Inflammatory markers were considerably raised (white cell count 24.0, neutrophils 21.8, CRP 372, ESR 84 mm/h). Liver function tests were abnormal: bilirubin 10, alkaline phosphatase 221 IU/l and alanine transaminase 56 IU/l. Total creatine kinase was not elevated at 36 IU/l. Initial treatment with broad-spectrum antibiotics was not successful in resolving his illness.

Results: MRI demonstrated symmetric inflammation involving the proximal muscle groups of the pelvis and both thighs in keeping with a non-specific inflammatory myopathy/polymyositis. An EMG was consistent with a proximal myopathy largely affecting the lower limbs, with chronic features, slightly atypical for inflammatory myopathy. Muscle biopsy microbiology identified S. aureus sensitive to flucloxacillin and linezolid. Infectious myositis secondary to S. aureus was diagnosed. The inflammatory markers begun to normalize and the symptoms improved after the initiation of linezolid. In total, 2 months of oral linezolid (patient was penicillin allergic) were required for the inflammatory markers to normalize and symptoms to resolve. Repeat MRI 3 months after the admission showed significant improvement of the inflammatory changes in the pelvic and thighs muscle groups with no evidence of continuing myositis. Previous long-term steroid use may have led to suppressed immune response to infections in our patient.

Conclusion: We encourage clinicians to maintain an index of suspicion for infectious pyomyositis in patients with myalgia and fever in absence of significant elevation of muscle enzymes. Linezolid appears to be an effective treatment for S. pyomyositis, which in the case of our patient led to a complete recovery.

Disclosure statement: The authors have declared no conflicts of interest.