

Fatal Disseminated *Anncaliia algerae* Myositis Mimicking Polymyositis in an Immunocompromised Patient

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Abstract

The first New Zealand case of *Anncaliia algerae* myositis in a 55-year-old man with a history of psoriatic arthritis, treated with long-term immunosuppressive therapy will be presented. He resided in the city of Rotorua, which is famous for geothermal hot springs. A vastus lateralis muscle biopsy was performed to investigate the cause of an unexplained myositis. Light microscopy demonstrated a necrotizing myositis with scattered clusters of ovoid spores within the myocyte cytoplasm resembling microsporidia. DNA analysis by PCR and electron microscopy confirmed microsporidial myositis with features characteristic of *A. algerae*. Immunosuppressive drugs were stopped and the patient was treated with cholestyramine wash and albendazole. The patient deteriorated with involvement of bulbar and respiratory muscles requiring intensive care and ventilation. He died 3 weeks after diagnosis. Post-mortem examination of skeletal muscle from tongue and intercostal muscles also revealed numerous organisms confirming disseminated disease.