Cutaneous thigh abscess secondary to melioidosis: a rare cause for a common presentation

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DESCRIPTION

Melioidosis is a notifiable disease caused by *Burkholderia pseudomallei*. It is associated with a mortality rate of up to 50% and over the last decade, has only been reported 46 times, within the UK.¹ This gram-negative bacterium is endemic to Southern China, South-East Asia and Northern Australia, being acquired via direct contact with contaminated water or soil, especially in those with risk factors such as diabetes mellitus, pre-existing renal disease and thalassaemia.²

Melioidosis can commonly have a long latency period of a decade or more, presenting with a wide range of clinical manifestations, including fever, respiratory disease and sepsis, though is thought to be significantly underdiagnosed in the UK.³ While abscess formation is a recognised complication, cutaneous lesions represent a fraction (4.9%) of reported UK cases.^{1,4,5}

Here, we present a case of cutaneous melioidosis, identified in a 26-year-old Asian male: a university student with no medical history, presenting to an Urgent Care Centre in November 2020 with a 3-week history of a tender, 3×4 cm abscess on his left posterior thigh (figure 1). The abscess increased in size despite a 5-day course of oral flucloxacillin, requiring incision and drainage, with 5 mL of white pus being sent for microscopy and culture. A gram-negative bacillus was isolated on blood and chocolate agar plates, however, local molecular testing (matrix-assisted laser desorption/ionization (MALDI-TOF) mass spectrometry) failed to identify the organism.

The patient originally born in Shanghai, China, emigrated to the USA aged 16, living in Indiana, New York state and Massachusetts, occasionally making return visits to Shanghai for family. As the patient reported a history of travel to Hainan at age 16 and Palau in his early 20s, the isolate was forwarded to the rare and imported pathogens laboratory where *B. pseudomallei* was confirmed by PCR.¹

The patient was admitted to the regional infectious diseases unit where the abscess continued to discharge pus and *B. pseudomallei* was again confirmed from a wound swab. There were no clinical features of systemic infection and CT of thorax, abdomen, pelvis and lower limbs confirmed no evidence of disseminated disease or osteomyelitis.

Following the Darwin Melioidosis Treatment Guidelines and available susceptibility testing (fully sensitive to meropenem and intermediately sensitive to ceftazidime and cotrimoxazole), the patient received 14 days of intravenous meropenem and

Figure 1 Photograph of cutaneous abscess, on posterior left thigh, secondary to melioidosis.

Learning points

- ▶ Melioidosis has an associated mortality rate of up to 50%.
- ▶ Cutaneous abscesses are a rare presenting feature for melioidosis.
- ▶ As international travel become increasingly more accessible and affordable, rare, imported diseases such as melioidosis are likely to become more common in the UK.

was discharged to complete a minimum of 3 months of oral cotrimoxazole.^{6,7}

At 2 months follow-up, the patient's wound has healed satisfactorily, he remains systemically well and has been able to return to university.

Cutaneous abscesses are a common presentation, with 720 044 cases alone presenting to UK Accident & Emergency departments in 2016.⁸ While the common diagnoses such as cellulitis and sebaceous cysts are well recognised, melioidosis is rarely a considered differential diagnosis. However, as international travel becomes increasingly more affordable, imported diseases such as melioidosis are likely to become more prevalent. This case highlights not only the importance of a comprehensive travel history in the investigation of infections, but also the fundamental role of microbiology in making a definitive diagnosis which is crucial to both effective patient care and public safety.

Contributors The concept and planning for this case report was jointly conducted by SH and FL. A literature search was then conducted by SH, whom wrote and referenced the first draft of the

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case report. Following the first editorial review, infectious diseases consultant (NE) and trainee (AR) whom clerked and treated the patient following hospital transfer, reviewed the initial draft, contributing specifics on the diagnosis of the disease and the treatment administered to the patient.

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