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Case Report: Melioidosis in non-endemic settings: a case with atypical presentation and diagnostic challenges.

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Introduction

Burkholderiapseudomallei infection is rare in Europe and usually seen in the context of travel-related infection.

Case report

We report a case of a 43-year-old male from Gujarat, India living in the UK, who developed relapsed *B. pseudomallei* infection on a background of poorly controlled diabetes, alcoholism and malnutrition. He presented in diabetic ketoacidosis and was admitted to intensive care for multi-organ support.

Admission blood cultures flagged positive after 5-days incubation and an oxidase positive, Gram-negative bacillus grew on blood and chocolate agar after 24 hours. The organism was resistant to gentamicin and colistin but sensitive to ceftazidime, meropenem and piperacillin/tazobactam on disc diffusion testing. It was initially poorly identified as *Burkholderiamultivorans* and *Burkholderiacepacia* using MALDI-TOF MS and API 20NE respectively. The organism was sent to the reference laboratory for *B. pseudomallei* PCR which was positive. Urine culture and the dialysis catheter tip subsequently grew *Trichosporon asahii*.

CT head on admission showed no acute abnormality but CT of the chest/ abdomen/pelvis showed bi-basal cavitatory lung lesions, splenic infarction, and hypodense lesions in both kidneys. CT head repeated 16 days post-admission showed multiple cerebral abscesses. Trans-thoracic echocardiogram showed no vegetations and sputum was negative for *Mycobacterium tuberculosis* PCR and culture.

Despite initial response to meropenem, he rapidly deteriorated and developed seizures, likely secondary to new intracerebral abscesses. Positive cultures for *T. asahii* suggest secondary superadded fungal infection. Despite treatment with amphotericin B, isavuconazole and meropenem, the patient died.

Discussion and Conclusion

This case serves as a reminder that many cases of melioidosis are relapsed infection rather than recently acquired. Immunosuppression is a significant risk factor for relapse. Mortality is high and optimal treatment regimen for severe melioidosis remains unresolved.

Organism identification in a UK laboratory can prove challenging and some MALDI-TOF MS databases fail to identify *B. pseudomallei* adequately. Therefore, vigilance is required to identify suspicious isolates in order to pursue identification by alternative means.

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Melioidosis can occur in patients without a recent history of travel due to relapsing disease. A high level of clinical suspicion is required in order to identify the organism correctly on culture.