

THE GEORGE
WASHINGTON
UNIVERSITY
MEDICAL CENTER

An Unusual Prostate Infection in a Man returning from El Salvador

Matthew Tuck¹, Netanya Sandler², John Keiser¹, Afsoon Roberts¹, Shirley Kalwaney¹

¹George Washington University School of Medicine, ²National Institute of Allergy and Infectious Diseases

Introduction

We describe a man who traveled to El Salvador and developed a *Burkholderia pseudomallei* prostate abscess. While common in parts of Southeast Asia and Australia, this is only the second reported case of *Burkholderia pseudomallei* originating from El Salvador.

Case

A 29 year-old El Salvadorian male with newly diagnosed type 2 diabetes mellitus presented to our hospital with a 5-day history of dysuria, polyuria, and vomiting. On admission, he was febrile, tachycardic and orthostatic. Physical examination revealed right costovertebral tenderness, a normal abdominal exam and an enlarged non-tender prostate. Laboratory studies were pertinent for a WBC of 8980 cells/uL with 77% polymorphonuclear cells, 11% lymphocytes, and 8% monocytes; hemoglobin, 13.9 g/dL; and platelet count, 114,000/uL. The patient also had a serum glucose of 449mg/dL with an anion gap of 17 and a hemoglobin A1C of 11%. Urinalysis showed 36 WBC/hpf, 3 RBC/hpf, occasional bacteria, and >1000 g/L glucose. Blood cultures grew non-lactose fermenting, oxidase positive, gram negative rods. A CT scan of the pelvis revealed a 2.5 cm x 2.7 cm multi-loculated abscess, which was percutaneously drained. *Burkholderia pseudomallei* was isolated from both blood and abscess fluid. The patient was continued on parenteral antibiotic therapy for a total of 14 days and, based on the susceptibilities, was discharged on trimethoprim/sulfamethoxazole for an additional 3 weeks. He was instructed to return to our clinic, but was lost to follow up.

Figures



Figure 1: Endemic areas of infection

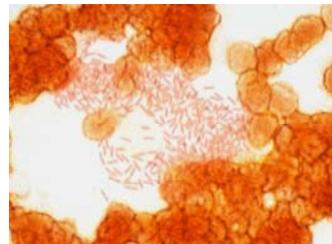


Figure 2: Gram stain of prostate fluid demonstrating a high burden of gram negative bacilli



Figure 3: Computed tomography scan showing multi-loculated prostate abscess (arrow)

Discussion

Burkholderia pseudomallei is a gram negative facultative intracellular non-lactose fermenting bacillus that is found in contaminated water and soil and is spread to humans through direct contact with the contaminated source. The bacterium is the etiologic agent for melioidosis and is responsible for disease ranging from asymptomatic infection to fulminant sepsis. Clinically similar to glanders disease, illness manifests as either localized infection, pulmonary infection, bloodstream infection, or as a chronic suppurative infection. Risk factors for infection include diabetes mellitus (as in our patient), heavy alcohol use, liver and renal disease, and impaired neutrophil function. Endemic in Southeast Asia and Northern Australia, *Burkholderia pseudomallei* is rarely reported elsewhere.

Conclusions

Though melioidosis is not typically found in the United States, it should be included in the differential diagnosis of gram negative bacillus prostate abscess or bacteremia in patients returning from endemic areas. This is only the second reported case of *Burkholderia pseudomallei* originating from El Salvador.

References

1. Currie BJ, Fisher DA, Howard DM, et al. Endemic melioidosis in tropical Northern Australia: a 10-year prospective study and review of the literature. *Clin Infect Dis*. 2000; 31:981-986.
2. Dance DA. Melioidosis: the tip of the iceberg? *Clin Microbiol Rev* 1991; 4:52-60.
3. Cheng AC, Currie BJ. Melioidosis: epidemiology, pathophysiology, and management. *Clin Microbiol Rev* 2005; 18:383-416.
4. McCormick JB, Sexton DJ, McMurray JG, Carey E, Hayes P, Feldman RA. Human-to-human transmission of *Pseudomonas pseudomallei*. *Ann Intern Med* 1975; 82:512-513.
5. McDowell F, Varney PL. Melioidosis: Report of first case from the Western Hemisphere. *JAMA* 1947; 134:361-362.
6. Beamer PR, Varney PL, Brown WG, McDowell F, Eck B. Melioidosis: Report of second case from the Western Hemisphere, with bacteriologic studies on both cases. *Am J Pathol* 1948; 24:717-718.
7. Inglis TJ, Rollin DB, Sousa-Ado Q. Melioidosis in the Americas. *Am J Trop Med Hyg* 2006; 75:947-954.
8. Blech M, Soudry JC, Guzman AA. Infections from *Pseudomonas* other than *aeruginosa*. *Reviews of The Institute of Investigational Medicine (El Salvador)* 1981;10:164-89.
9. Centers for Disease Control and Prevention. Laboratory exposure to *Burkholderia pseudomallei*—Los Angeles, California, 2003. *MMWR Morb Mortal Wkly Rep* 2004; 53:988-990.
10. Centers for Disease Control and Prevention. Imported melioidosis—South Florida, 2005. *MMWR Morb Mortal Wkly Rep* 2006; 55:873-876.
11. Dhienisiri T, Eaa-Ananta Y. Visceral abscess in melioidosis. *J Med Assoc Thai* 1995; 78:225-231.
12. Aphnives C, Pacheraat K, Chaiyakum J, Laopaboon V, Aphnives P, Phuntharak W. Prostatic abscesses: radiographic findings and treatment. *J Med Assoc Thai* 2004; 87:810-815.