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MELIOIDOTIC PROSTATIC ABSCESS - A CASE REPORT

Urology

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ABSTRACT

Melioidosis(Whitmore's disease) is caused by Burkholderia pseudomallei a Gram negative bacillus. Prostatic abscess due to melioidosis is uncommon and is difficult to diagnose. Our case was a 32 yr old male who presented with history of fever and burning micturition of 10days duration, On examination and CT scan patient was found to have a prostatic abscess. Blood culture showed growth of Burkholderia pseudomallei. He was treated with imipenem plus cilastatin 1gm every 8h . In view of persistent fever he underwent transurethral deroofing of prostate following which he had an uneventful recovery. Melioidosis is often a fatal disease caused by B. pseudomallei. It can form abscess in any organ including prostate. This study should alert the practicing urologist to the rare, yet potentially life threatening cause of prostatitis and prostatic abscess.

KEYWORDS

Burkolderia pseudomallei; prostatic abscess

Introduction

The name melioidosis is derived from the Greek *melis* meaning "a distemper of asses". It is a condition similar to glanders.[1] Melioidosis also called as Whitmore's disease after Captain Alfred Whitmore, who first described the disease[2]. Melioidosis is caused by Burkholderia pseudomallei, a Gram negative bacillus. Prostatic abscess due to melioidosis is uncommon and is difficult to diagnose because of its wide range of symptoms. Symptoms are similar to a range of diseases and are often misdiagnosed which can lead to fatality. Diagnosis of melioidisis is best achieved by isolating the organism on Ashdown medium. Treatment consists of an Initial Intensive phase of antimicrobials (2week IV Ceftazidine 2gm every 6 h or IV Imipenem plus Cilastatin 1gm every 8 h)[3]. Followed by a prolonged eradication phase to prevent relapse (double strength Trimethoprim plus Sulfamethoxazole, twice daily for a minimum of three months). Abscess requires aspiration or surgical drainage and if large enough and located in the prostate, transurethral resection (deroofing) of the abscess should be considered.

Case report

A 32 yr old male presented with history of fever and burning micturition of 10days duration. On clinical evaluation and CT scan he was found to have a prostatic abscess. Blood culture showed growth of Burkholderia pseudomallei. He was treated with imipenem plus cilastatin 1gm eighth hourly. In view of persistent fever patient underwent transurethral deroofing of prostate following which he had an uneventful recovery.

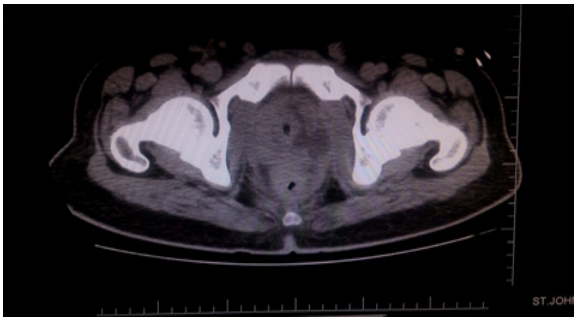

Figure 1 : CT Pelvis showing enlarged, heterogeneously enhancing prostate with multiple non enhancing hypodense cystic attenuating foci within.

Figure 2 : CT Pelvis showing prostatic abscess with the largest pocket in the left postero-inferolateral aspect with outward bulge indenting the left levator ani.

Discussion

Melioidosis is an infectious disease caused by a Gram-negative bacterium, Burkholderia pseudomallei, found in soil and water. Prostatic abscess due to melioidosis is uncommon and is difficult to diagnose because of its wide range of symptoms. Symptoms are similar to a range of diseases and are often misdiagnosed which can lead to fatality. It can either be acute or chronic.

Acute melioidosis: The mean incubation period of acute melioidosis is 9 days (range 1–21 days)[4]. Patients with latent melioidosis may be symptom-free for decades; the longest period between presumed exposure and clinical presentation is 62 years. The potential for prolonged incubation was recognized in US servicemen involved in the Vietnam War, and was referred to as the "Vietnam time-bomb"[5]. There are four general types of acute infection including localized, pulmonary, blood-borne, or disseminated throughout the body. Patients with melioidosis usually present with fever. Pain or other symptoms may be suggestive of a clinical focus, which is found in around 75% of patients. Such symptoms include cough or pleuritic chest pain suggestive of pneumonia, bone or joint pain suggestive of osteomyelitis or septic arthritis, or cellulitis. It can also present as an intra-abdominal infection which can be liver and/or splenic abscesses, or prostatic abscesses.

Chronic melioidosis is usually defined by a duration of symptoms greater than two months and occurs in about 10% of patients[6]. The clinical presentation of chronic melioidosis is protean and includes

such presentations as chronic skin infections, chronic lung nodule, and pneumonia. Chronic melioidosis closely mimics tuberculosis, and has sometimes been called "Vietnamese tuberculosis"[7].

A complete screen including blood culture, sputum culture, urine culture, throat swab, and culture of any aspirated pus should be performed on all patients with suspected melioidosis. Culture should be done on blood agar as well as Ashdown's medium. A definitive diagnosis is made by growing B. pseudomallei from any site[8]. The sensitivity of urine culture is greater if a centrifuged specimen is cultured, and any bacterial growth should be reported (not just growth above 10^4 organisms/ml which is the usual cutoff)[9].

Very occasionally, bone marrow culture may be positive in patients who have negative blood cultures for B. pseudomallei, but these are not usually recommended[10]. A common error made by clinicians unfamiliar with melioidosis is to send a specimen from only the affected site (which is the usual procedure for most other infections) instead of sending a full screen.

Imaging of the abdomen using CT scans or ultrasound is recommended routinely, as abscesses may not be clinically apparent and may coexist with disease elsewhere[11].

Differential diagnosis is extensive; melioidosis may mimic many other infections, including tuberculosis[12]. Treatment of melioidosis is divided into two stages, an intravenous high-intensity phase and an eradication phase to prevent recurrence. During intensive phase intravenous ceftazidime is the current drug of choice for treatment of acute melioidosis and should be administered within 10 to 14 days of getting the infection[13]. Following the treatment of the acute disease, eradication (or maintenance) treatment with co-trimoxazole and doxycycline is recommended to be used for 12 to 20 weeks to reduce the rate of recurrence14. Abscess requires aspiration or surgical drainage and if large enough and located in the prostate, transurethral resection (deroofing) of the abscess should be considered.

Without access to appropriate antibiotics (principally ceftazidime or meropenem), the septicemic form of melioidosis exceeds mortality rate of 90%.[15]

This study of rare case of meliodotic prostatic abscess should alert the practicing urologist to the rare, yet potentially life threatening cause of prostatitis and prostatic abscess.

Conclusion

Melioidosis is often a fatal disease caused by B. pseudomallei. It can form abscess in any organ including prostate. This study should alert the practicing urologist to the rare, yet potentially life threatening cause of prostatitis and prostatic abscess.

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