

A rare case of prostatic abscess caused by *Brucella* organisms: First report in Saudi Arabia

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Abstract

Brucellosis is a zoonotic infectious disease that is known endemic infection in Saudi Arabia. Yet, this infection has not been reported as evident cause of prostatic abscess. we present a new case of prostatic abscess caused by brucella organism proven using pus culture and serology. These organisms should be suspected in patients presenting with clinical picture of prostatic abscess especially in endemic areas.

Keywords: *Brucella*, brucellosis, infection, prostate, prostatic abscess, prostatitis

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INTRODUCTION

Brucellosis is a zoonotic infectious disease caused by *Brucella* Bacterium. This organism transmitted from animals to humans by consumption of infected food or direct contact with a diseased animal.^[1] This bacterium is small aerobic intracellular coccobacilli and shed in large numbers in animal's urine and milk such as sheep and cattle.^[2] Diagnosis of the disease is based on clinical picture, culture, and serology (Ulu-Kilic *et al.*, 2013).^[3] Brucellosis is endemic in Saudi Arabia with a proximal mean of 4164 cases annually (Aloufi *et al.*, 2016).^[4] Whereas, organisms most frequently involved in prostatic abscess are Gram-negative enterobacteriaceae including *Escherichia coli* (Barozzi *et al.*, 1998), *Brucella* organism has not been a causative agent of prostatic abscess in Saudi Arabia. This case report aims to inform a rare case with *Brucella* prostatic abscess in Saudi Arabia.

Objective

This case report describes a case of 54-year-old male presented with urinary manifestations, and eventually proved to have *Brucella* prostatic abscess using a confirmed culture.

CASE REPORT

A 54-year-old male, known diabetic patient presented to our urology OPD, with a chief complaint of dysuria, weak urine stream, suprapubic pain radiating to perineal area, urethral pus discharge, and fever for approximately 2-week duration. The symptoms did not improve post a course of antibiotics for 1 week. The patient reported ingestion of raw milk before the presentation of symptoms. On examination, vital signs were showing high-grade fever, otherwise unremarkable. Digital rectal examination showed enlarged tender prostate. Laboratory tests showed mild leukocytosis

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with elevated lymphocytes and monocytes. Urine analysis showed pus cells and red blood cells. Transrectal ultrasonography and computed tomography (CT) scan confirmed the diagnosis of prostatic abscess. Transurethral drainage of the abscess, performed for the patient and Foley's and suprapubic catheter inserted to relieve obstruction. Pus culture and titration were positive for *Brucella* Bacteria. Postoperatively, the patient received intravenous (IV) fluids and antibiotics including sulfamethoxazole/trimethoprim and gentamicin. One week after surgery, the patient developed low-grade fever and urine culture showed *Staphylococcus* species and the patient received ciprofloxacin. Two weeks later, the patient improved and discharged home on Sulfamethoxazole/trimethoprim. A follow-up CT scan, performed, and no further collection of abscess detected with complete resolution.

DISCUSSION

Prostatic abscess is uncommon case in clinical practice especially with prevalent use of antibiotics.^[5] There are different mechanisms exist regarding causation, which include acute or chronic prostatitis; retrograde stream of contaminated urine; or hematogenous spread of distant infection.^[6] Predisposing factors for the incidence of prostatic abscess include diabetes, urinary catheter, bladder outlet blockade, chronic renal failure, and chronic liver disorder.^[7] It is above-mentioned that, prostatic abscess is mainly caused by Gram-negative enterobacteriaceae including *E. coli* (Barozzi *et al.*, 1998).

Our patient is known to have diabetes as a predisposing risk factor with history of ingestion of raw milk. This patient was diagnosed with brucellosis based on serologic test and thus proposed source for hematogenous spread of the infection into prostate. The obtained pus culture showed that prostatic abscess contained *Brucella* organisms. The patient was treated by IV fluids and antibiotics including sulfamethoxazole/trimethoprim, Gentamicin,

and ciprofloxacin. Transurethral drainage of the abscess was done for the patient with Foley's and suprapubic catheter insertion to relieve obstruction.

In summary, we present a new case of prostatic abscess caused by *Brucella* organisms proven using pus culture and serology. These organisms should be suspected in patients presenting with clinical picture of prostatic abscess especially in endemic areas.

CONCLUSION

This case report, informs the first case of prostatic abscess caused by *Brucella* bacteria in Saudi Arabia. We suggest considering *Brucella* infection in history taking and management approach for patients with clinically suspected prostatic abscess.

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Conflicts of interest

There are no conflicts of interest.

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