

Prostate Abscess: A Case Study

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Abstract

Case Report

Prostatic abscess is an uncommon condition characterized by clinical symptoms that may lack specificity. Diagnosis heavily relies on transrectal ultrasound and computed tomography. Treatment involves a combination of antibiotic therapy and drainage, with percutaneous perineal puncture and transurethral resection being the most effective methods.

Keywords: Abscess, prostate, infection.

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INTRODUCTION

The prostatic abscess is a rare pathology that most commonly complicates acute prostatitis [2]. With the widespread use of antibiotics, its symptomatology has become less typical [1, 2]. Its diagnosis is currently facilitated by medical imaging [2, 3]. Through the study of this observation, the authors discuss the diagnostic and therapeutic aspects of this condition.

OBSERVATION

A 69-year-old man presented to the emergency department with a fever of 40°C, dysuria, rectal pain, as well as frequent and urgent urination, symptoms that had persisted for 1 week. He had a five-year history of benign prostatic hyperplasia, treated with alpha-blockers.

Digital rectal examination revealed a painful and fluctuating palpable mass in the prostate. His leukocyte count was $13.5 \times 10^4/L$, serum creatinine level was 57 $\mu\text{mol/L}$, and C-reactive protein (CRP) was 142 mg/l.

Microscopic analysis of urine indicated moderate bacteriuria; strip tests showed a strongly positive result for leukocyte esterase and positive for nitrites.

After establishing a diagnosis of prostatitis, the patient was hospitalized, and intravenous antibiotic therapy with ceftriaxone (2 g/day) was initiated.

As the patient had been febrile for more than 48 hours, an abdominopelvic computed tomography with contrast was performed, revealing a fluid-filled image adjacent to the prostatic median lobe measuring 16 x 12 mm, suggestive of a prostatic abscess (Figure 1).

Urine culture identified *Escherichia coli* (10.6 organisms/ml) sensitive to the antibiogram; blood culture was negative. During hospitalization, post-micturition residual volume was measured by the bladder at multiple instances, ranging between 20 and 40 cc, and thus, no indwelling catheter was inserted.

The patient underwent daily monitoring, showing significant improvement; the last assessment before discharge indicated CRP of 39 mg/l and white blood cell count of 4.7 G/l. After a week of hospitalization, a follow-up ultrasound revealed a regression of the prostatic abscess from 16 x 12 mm to 5 x 8 mm.

Given the clinical and biological improvement, the patient was discharged with antibiotic treatment consisting of ofloxacin 200 mg in the morning and evening for three weeks, along with alfuzosin and *Serenoa repens*.

A follow-up urology consultation is scheduled after 45 days, including a urine culture and prostate-specific antigen (PSA) test.



Figure 1: Abdominopelvic Computed Tomography (axial section) showing a fluid-filled image adjacent to the prostatic median lobe measuring 16 x 12 mm (prostatic abscess)

DISCUSSION

Prostatic abscesses occur in 2.7% of cases of acute bacterial prostatitis [1], a condition that predominantly affects elderly patients with diabetes mellitus. Long-term catheterization, prostate manipulation, urethral obstruction, and immunodeficiency are also predisposing factors [1].

Gram-negative bacilli and enterococci are most commonly implicated [1]. Prostatic abscess and bacterial prostatitis share similar symptoms [1], but a fluctuant prostate on rectal examination may indicate an underlying abscess, as well as the observation, on CT scan, of hypertrophy and a fluid-filled image adjacent to the median lobe with unmarked liquid density.

Management options include antibiotic therapy (for abscesses < 1 cm) [2], transrectal ultrasound-guided aspiration, transurethral resection of the prostate, or open drainage [3, 4].

Transrectal ultrasound-guided aspiration is the preferred method due to its low risk of complications and the ability to be repeated. However, the risk of failure is high for abscesses with a diameter greater than 3 cm or an anechoic or heterogeneous appearance; for such lesions, transurethral resection of the prostate is preferable [4].

Advanced age, high fever, urinary retention, positive blood culture, and benign prostatic hyperplasia are associated with a poor prognosis [1].

CONCLUSION

Prostatic abscess is a rare pathology with a clinical symptomatology that is not always specific. Transrectal ultrasound and computed tomography play a crucial role in diagnosing this condition. Its treatment is based on antibiotic therapy and drainage, with percutaneous perineal puncture and transurethral resection being the most effective methods.

REFERENCES

1. Coker, T. J., & Dierfeldt, D. M. (2016). Acute bacterial prostatitis: diagnosis and management. *American family physician*, 93(2), 114-120.
2. Chou, Y. H., Tiu, C. M., Liu, J. Y., Chen, J. D., Chiou, H. J., Chiou, S. Y., ... & Yu, C. (2004). Prostatic abscess: transrectal color Doppler ultrasonic diagnosis and minimally invasive therapeutic management. *Ultrasound in medicine & biology*, 30(6), 719-724.
3. Basiri, A., & Javaherforooshzadeh, A. (2010). Percutaneous drainage for treatment of prostate abscess. *Urology Journal*, 7(4), 278-280.
4. Abdelmoteleb, H., Rashed, F., & Hawary, A. (2017). Management of prostate abscess in the absence of guidelines. *International braz j urol*, 43, 835-840.