

Prostatic abscess

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■ Cite as: *CMAJ* 2021 February 22;193:E290. doi: 10.1503/cmaj.200470

A 72-year-old man presented to the emergency department with a 3-week history of fever, dysuria and rectal pain, along with urinary frequency and urgency. The patient had a 10-year history of type 2 diabetes and benign prostatic hypertrophy, which had been treated with metformin and finasteride, respectively. His examination was remarkable for a palpable, tender fluctuant mass on digital rectal examination of the prostate. He had a white blood cell count of 13.5 (normal range $4-10$) $\times 10^9/L$ and a serum creatinine level of 141 (baseline 114) $\mu\text{mol/L}$. Urine microscopy showed moderate bacteria; large positive leukocyte esterase and positive nitrite results were seen on urine dipstick testing. He was admitted to hospital with a diagnosis of prostatitis and started on ceftriaxone administered intravenously (1 g/d).

Because the patient remained febrile for more than 48 hours after treatment was started, we obtained contrast-enhanced computed tomography (CT) of the abdomen and pelvis, which showed heterogeneous attenuation of the prostate gland suggestive of prostatic abscesses (Figure 1; Appendix 1, available at www.cmaj.ca/lookup/doi/10.1503/cmaj.200470/tab-related-content). A urine culture identified *Klebsiella pneumoniae*. Results for blood culture were negative. A few days after admission, he had difficulty urinating, which required insertion of an indwelling urethral catheter. He underwent a transurethral resection of the prostate and abscess drainage. Histopathology of a biopsy specimen showed inflammation with necrosis and abscess formation. Urinary retention developed after the resection; we prescribed ciprofloxacin administered orally and discharged our patient to home with an indwelling catheter that was removed after 2 days. At a follow-up visit 6 weeks later, he reported no symptoms.

Prostatic abscesses occur in 2.7% of patients with acute bacterial prostatitis,¹ which occurs most commonly in older patients with diabetes mellitus. Other predisposing factors include long-term catheterization, prostatic manipulation, urethral obstruction and an immunocompromised state.¹ Gram-negative bacilli and *Enterococcus* are most frequently involved.¹ The presentation of a prostatic abscess is similar to that of bacterial prostatitis;¹ however, fluctuance of the prostate on digital rectal examination can suggest the presence of an underlying abscess. Findings on CT include enlargement and heterogeneous attenuation of the prostate with nonenhancing fluid-density collections. Management options include antibiotics (abscesses $< 1\text{ cm}$),² transrectal ultrasonography-guided aspiration, transurethral resection of the prostate and open drainage.^{3,4} Transrectal ultrasonography-guided aspiration is preferred because of its low risk of complications and may be repeated. However, failure is common for aspiration of abscesses greater than 3 cm or with an anechoic or heterogeneous appearance; for these lesions, transurethral resection of the prostate is preferred.⁴ Older age, high-grade fever, urinary retention, positive results for blood cultures and benign prostatic hyperplasia are associated with poor outcomes.¹

References

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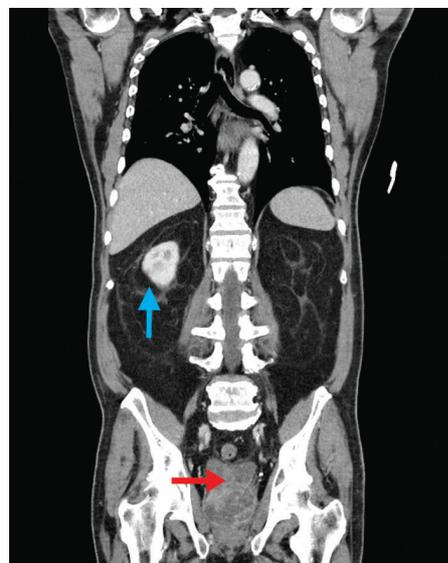


Figure 1: Coronal computed tomography scan of the abdomen and pelvis in a 72-year-old man with rectal pain and fever, showing prominent right perinephric stranding (blue arrow). Enlargement (7 cm in diameter) and heterogeneous attenuation of the prostate gland with nonenhancing fluid-density collections are suggestive of prostatic abscesses (red arrow).

Competing interests: None declared.

This article has been peer reviewed.

The authors have obtained patient consent.

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