



## Inflammation and Infection

## Transrectal Ultrasound Guided Needle Aspiration of a Prostatic Abscess: Salvage Treatment After Failed Transurethral Resection



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## ABSTRACT

The treatment for prostate abscesses includes a combination of antimicrobial therapy and surgical drainage of the abscess cavity. There is a lack of published cases involving treatment options for a prostate abscess after a failed transurethral resection of the prostate. This is a case report describing a successful salvage treatment after a failed attempt at abscess drainage by a transurethral resection of the prostate. The patient was successfully managed with a needle drainage of his prostate abscess utilizing a transrectal ultrasound guided needle decompression his prostate abscess.

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## Introduction

An abscess of the prostate is a relatively uncommon, but potentially serious affliction that requires prompt evaluation to avoid potentially devastating consequences.<sup>1</sup>

## Case report

A fifty-six-year-old uncontrolled, diabetic male with a history of chronic prostatitis presented to an outside emergency department with complaints of perineal pain, dysuria, and urinary retention. A Foley catheter was placed and oral antibiotics were administered for prostatitis. The patient presented to our institution with worsening pain and fevers to 39.4 °C. His examination was remarkable for perineal tenderness, perineal erythema, and purulent discharge from around his Foley catheter. Computer tomography (CT) of the pelvis with contrast documented an enlarged prostate measuring 5.2 × 4.6 cm and heterogenous enhancement with areas of low attenuation consistent with a prostatic abscess (Fig. 1A). He was brought to the operating room for a transurethral drainage of the prostatic abscess. Despite a routine procedure with the standard treatment for prostate abscess,<sup>2</sup> the patient continued to decline clinically, developing florid sepsis with multiorgan dysfunction

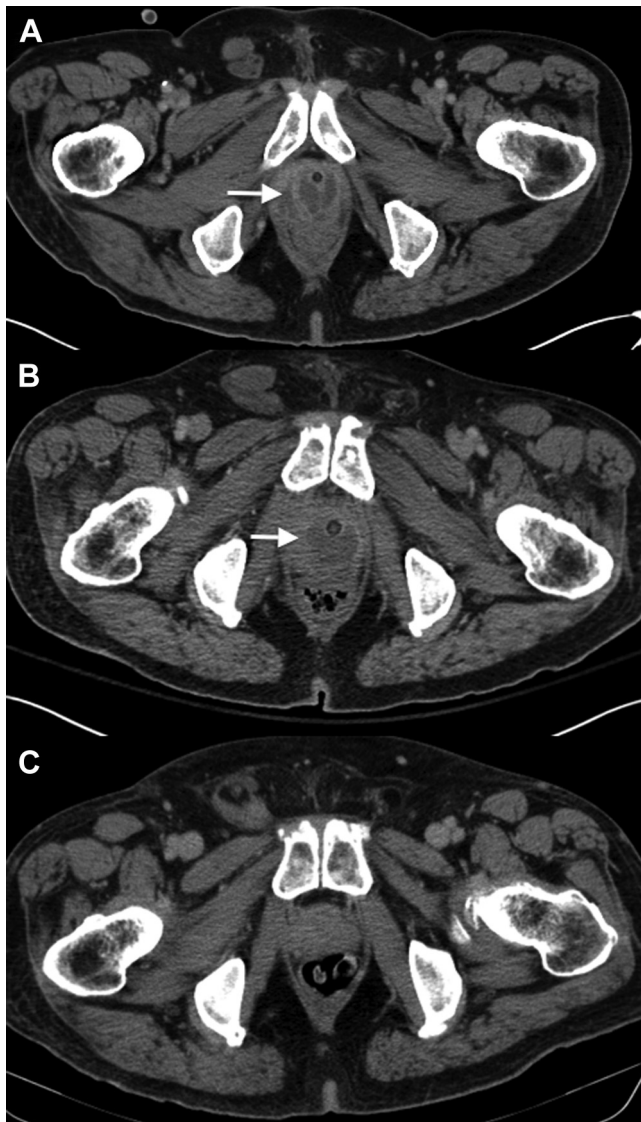
requiring intubation and multiple sympathomimetics to support his blood pressure. A repeat CT scan done on hospital day three documented stable size and appearance of the prostate with continued areas of central low attenuation compatible with a multiloculated prostate abscess (Fig. 1B). The patient was then taken for transrectal ultrasound guided needle drainage of the abscess (Fig. 2A and B). A 21-g Chiba biopsy needle was used under ultrasonic guidance to transrectally drain 15 ml of purulent material from the prostate. The patient demonstrated dramatic improvement after receiving this salvage treatment, becoming afebrile, and was both extubated and weaned off pressors within 24 hours of needle aspiration. He remained hospitalized for an unrelated gastrointestinal bleed and was discharged home on hospital day fifteen. Cultures obtained from the abscess fluid ultimately grew *Staphylococcus aureus*. A follow-up CT scan documented resolution of the prostatic abscess (Fig. 1C).

## Discussion

Majority of prostate abscess occur in diabetic and immunocompromised patients, as was the case of this patient.<sup>2</sup> Clinical presentation is variable, but can include: fever, irritative voiding symptoms and a tender prostate on digital rectal exam.<sup>2</sup> Recommended treatment includes, transurethral unroofing of the abscess,<sup>3</sup> appropriate antibiotic therapy, as well as supportive care. CT imaging usually will document an area of low attenuation with well defined margins within the prostate. Ultrasonography demonstrates an area of hypoechoic walled-off fluid collection

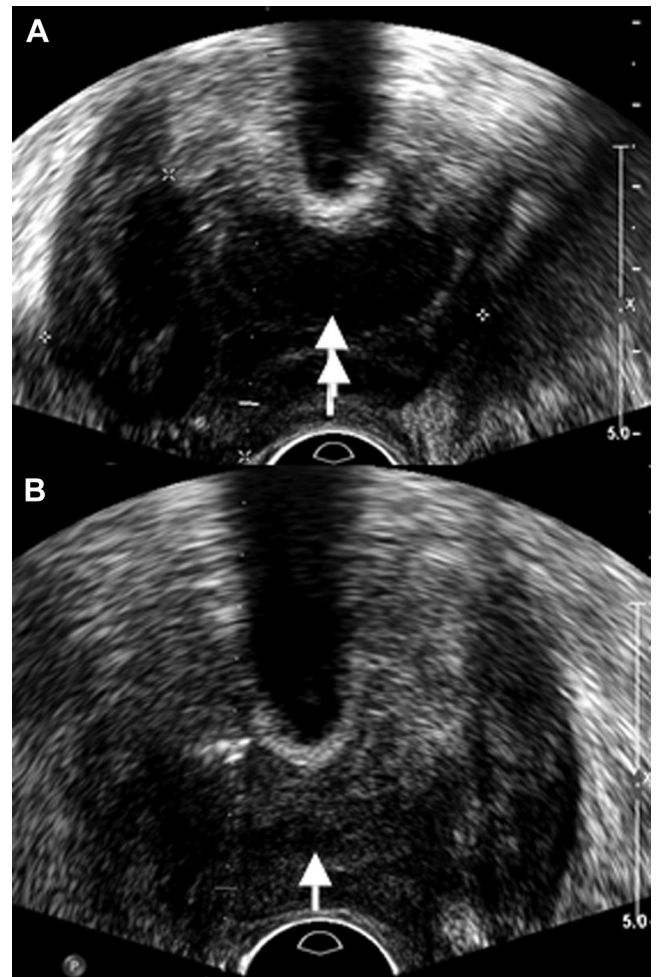
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**Figure 1.** Sequential transverse CT images of the prostate. A) Image from day of admission demonstrating area of low attenuation in the prostate consistent with abscess (arrow). B) Image on hospital day 3 with continued presence of abscess despite aggressive transurethral resection (arrow). C) Image 1 month after drainage, demonstrating resolution of the abscess.

(Fig. 2A). Despite undergoing the standard therapy with aggressive<sup>4</sup> transurethral resection of the prostate, the patient continued to decline. Though there has been numerous published reports of addressing a prostate abscess by transrectal ultrasound guided drainage, but to our knowledge, this is the first report of its kind, utilizing transrectal ultrasound guided needle aspiration to salvage a failed transurethral drainage of prostatic abscess.



**Figure 2.** Transrectal ultrasound of the prostate. A) Image with two hypoechoic regions indicating persistence of prostate abscess after transurethral resection (double arrow). B) Image with collapse of abscess cavity after transrectal needle drainage (arrow).

### Conflicts of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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