

Prostatic abscess with Fournier's Gangrene: a case report

Abscesso prostático com Síndrome de Fournier: um relato de caso

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Abstract

Background: Prostatic abscess mainly affects immunosuppressed patients. If not properly managed, it can progress to sepsis and death. Due to its wide symptomatology, it must be among the differential diagnosis. Different approaches are described. We present a brief review on the topic and the case of a patient diagnosed with prostate abscess associated with inguinoscrotal abscess, its surgical management, and outcomes. **Case Presentation:** A 55-year-old man presented complaints of pelvic pain, dysuria, edema, and hyperemia of the inguinoscrotal region. Subsequent investigation with complementary exams revealed a prostatic and inguinoscrotal abscess. The management chosen was a transurethral endoscopic drainage of the prostate; the inguinoscrotal abscess was treated by incision and drainage. The patient had a good postoperative evolution, and he was discharged in 10 days. **Conclusion:** The endoscopic drainage of a prostatic abscess through transurethral drainage is an effective modality. This diagnosis must be investigated with high suspicion, and when made, treated aggressively.

Keywords: Abscess, Prostate, Prostatic diseases, Scrotum, Infection, Drainage

Resumo

O abscesso prostático afeta principalmente pacientes imunossuprimidos. Se não for tratada adequadamente, pode evoluir para sepse e morte. Devido à sua ampla sintomatologia, deve estar entre os diagnósticos diferenciais. Diferentes abordagens são descritas. Apresentamos uma breve revisão sobre o tema e o caso de um paciente com diagnóstico de abscesso prostático associado a abscesso inguinoescrotal, seu manejo cirúrgico e desfechos. **Apresentação do caso:** Um homem de 55 anos apresentou queixas de dor pélvica, disúria, edema e hiperemia da região inguinoescrotal. A investigação posterior com exames complementares revelou abscesso prostático e inguinoescrotal. O manejo escolhido foi a drenagem endoscópica transuretral da próstata; o abscesso inguinoescrotal foi tratado por incisão e drenagem. O paciente teve boa evolução pós-operatória, recebendo alta hospitalar em 10 dias. **Conclusão:** A drenagem endoscópica de um abscesso prostático por meio da drenagem transuretral é uma modalidade eficaz. Esse diagnóstico deve ser investigado com alta suspeita e, quando feito, tratado rapidamente.

Palavras chave: Abscesso, Próstata, Doenças prostáticas, Escroto, Infecção, Drenagem

Introduction and Background

A prostatic abscess is seen when the localized collection of purulent fluid, caused by inflammatory reaction, arises from an acute bacterial prostatitis (ABP)⁽¹⁾. Prostatic abscess mainly affects diabetic, end-stage renal disease, liver cirrhosis and immunosuppressed patients. Furthermore, the prostatic abscess, if not properly managed, can progress to severe urosepsis, septic shock and death⁽²⁾. We report the case of a patient with a prostatic abscess who developed an inguinoscrotal abscess, and its management.

Presentation of Case

Our patient is a 55-years-old man with medical history of poorly controlled diabetes mellitus and systemic arterial hypertension, he had no previous urologic instrumentation. He had complaint of dysuria

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Disclosure Statement: No competing financial interests exist.

Conflict of Interest: None

Consent - Written informed consent was obtained from the patient for publication of this and any accompanying images

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and urgency for a long time, but without follow up.

He presented to the emergency department with complaints of pain at the pelvic region and intense dysuria, without fever. Physical examination revealed edema and hyperemia of scrotum and right inguinal region (Figure 1). In the digital rectal exam, a bulged prostate and painful to the touch was noticed. Suspected prostate abscess was made, additional laboratorial and imaging exams were requested.



Figure 1 - Patient at the time of admission to the emergency room. Bulging in the right and scrotal inguinal region associated with hyperemia.

Blood count showed 18,300 leukocytes, urine analysis with infectious pattern and urine culture positive for *Escherichia coli*. The PSA value was of 23ng/cc.

Soft tissue ultrasound of the inguinal and scrotal region revealed a densification of the skin and subcutaneous tissue of the right inguinal region and testicular pouch, septate hydrocele on the right, collection in the right inguinal canal, orchiepididymitis on the right and inguinal lymph node enlargement.

Due to suspected prostatic abscess concomitant to soft tissue abscess, we chose to perform a tomography, our objective was to delineate the spread of infection to adjacent organs and help choosing the best drainage way. CT revealed prostate with enlarged dimensions, bulging the bladder floor, with heterogeneous attenuation. We did not perform a magnetic resonance imaging (MRI) since it was unavailable at the time.

Both prostatic lobes were filled with liquid collection, compatible with abscess formation (figure 2). Densification of the periprostatic pelvic fat plane was also shown.

We chose to drain the soft tissue abscess through an inguinal and a scrotal incision. The approach of the

prostate abscess was made with transurethral drainage (supplementary material 1). The incisional and transurethral drainage were performed synchronously in the same operative procedure, and the total drained volume was 200cc. Saline solution was used to cleanse the abscess cavities.

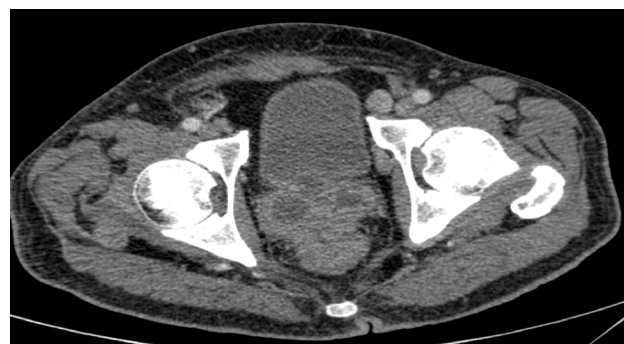


Figure 2 - CT scan image showing both prostatic lobes filled with liquid collection, compatible with abscess formation.

A 20Fr Foley catheter was kept for 2 days to maintain adequate drainage of urine, at the postoperative days, there was no flow of purulent liquid anymore. The inguinal and scrotal drains were maintained in place for 7 days (Figure 3).



Figure 3 - Second post-operative day; drains located in the right inguinal region and in the scrotum.

The patient was discharged at postoperative day 10. The culture of the scrotal abscess was positive for *Klebsiella* spp. The histopathological report of prostate resection was glandular stromal hyperplasia with purulent exudate.

He is now 6 months after surgery, with no micturition complaints (Figure 4). His PSA is now 2,4ng/cc.



Figure 4 - Patient 6 months after surgery.

Discussion

Prostatic abscess is an inflammatory reaction caused by infection process. Early diagnosis favors treatment, because the resolution of the prostatic abscess takes a long time and, sometimes, surgical drainage is necessary⁽¹⁾.

The clinical signs and symptoms are quite varied. Symptoms such as fever, dysuria, perineal pain are found in a few patients and are similar to ABP⁽³⁾. However, it is essential to distinguish ABP from prostatic abscess, because these diseases have different managements⁽⁴⁾. Thus, it is necessary to evaluate the complete blood count, blood culture, urine culture and urine analysis to discover the infectious agent and its location. It is possible to say that gram-negative bacteria are currently responsible for the formation of prostatic abscess. Among them, *Escherichia coli* stands out⁽⁴⁾. If a prostatic abscess is suspected, imaging studies are necessary to confirm the diagnosis⁽¹⁾.

Tests such as computed tomography (CT scan), transrectal ultrasound (TRUS), magnetic resonance

imaging (MRI) are used to obtain a diagnosis of prostatic abscess. In addition, imaging tests not only help with diagnosis, but also guide treatment for drainage of abscesses⁽²⁾.

Drainage of prostatic abscess can be performed mainly by 3 approaches: transrectal, transperineal and endoscopically by a transurethral resection of the prostate (TURP). Studies have shown that the treatment of patients with prostatic abscess with TURP has a shorter hospital stay compared to needle puncture⁽²⁾.

Conclusion

Thus, the endoscopic drainage for prostate abscess is an effective modality and its diagnosis must be investigated with high suspicion. Prostate abscess should be considered in patients with urinary complaints, fever, and pain. Its incidence in diabetic and immunosuppressed patients must be emphasized.

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Article received: December 14, 2020

Article approved: May 15, 2021

Article published: May 18, 2021