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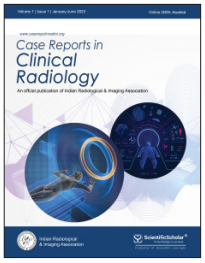

Case Report

Intriguing case of fistula-in-ano presenting as corpora spongiosum abscess

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ABSTRACT

A 77-year-old male, with a known history of diabetes mellitus for 10 years on alternative medication, known case of chronic constipation with hemorrhoids, and chronic lower urinary tract symptoms for many years, presented to the emergency with fever and chills for 2 days followed by acute urinary retention, which was relieved by insertion of Foley's catheter. Eventually, he developed pain in the perianal region along with perianal discharge. On clinical examination, fistula-in-ano was evident. Magnetic resonance imaging was done for further evaluation which revealed fistula-in-ano communicating into a large abscess of corpus spongiosum of penis.

Keywords: Corpora spongiosum, Abscess, Fistula-in-ano

INTRODUCTION

Penile abscess secondary to perianal fistula is extremely rare. Moreover, abscess of corpus spongiosum is extremely rare and only one case has been reported till date.[1] Patients with long standing diabetes mellitus are at risks of multiple comorbidities and abscess formation being one of them. This case report is thus unique for it documents simultaneous occurrence of two unusual manifestations. It reflects on the superadded risks due to both these factors that can lead to a serious complication.

CASE REPORT

A 77-year-old man, with a known history of diabetes mellitus for 10 years on alternative medication, known case of chronic constipation with hemorrhoids, and chronic lower urinary tract symptoms for many years, was presented to emergency with fever and chills for 2 days followed by acute urinary retention. Blood pressure was within normal limits. No history of previous major surgery was present. On per abdomen examination, tenderness was elicited in lower abdomen and deep pelvis. On per rectal examination, there was prostatomegaly with mild perineal tenderness. Clinical working diagnosis of acute prostatitis was made. Injection Amikacin was administered. Few days later, he developed vague discomfort and pain in the perianal region, which later aggravated and patient complained of perianal pus discharge. On clinical examination, external and internal hemorrhoids with fistula in ano were found [Figure 1]. Patient was advised hot sitz bath and intravenous metroniodazole was administered. Following

conservative management, the pain decreased next day and patient was afebrile.

Urine culture examination did not reveal any microorganism. WBC count was elevated (22.3 × 10^3/UL). PSA level was elevated (12.09 ng/mL). Glycated hemoglobin was 6.4% (upper limit or normal). Fasting blood sugar levels reached up to 180 mg/dl. In view of clinically detected fistula-in-ano, a magnetic resonance imaging (MRI) pelvis was advised. MRI revealed a perianal fistula with internal opening at 12 o'clock position, 5 cm above the anal verge, and associated multifocal abscess from 11 to 2 o'clock position. The fistulous tract was seen opening anteriorly into perineum extending into bulb of penis through Buck's fascia and opening into corpus spongiosum. A large abscess pocket was seen replacing the corpus spongiosum, surrounding the bulbar, and penile urethra. The corpora cavernosa were intact and seen separately [Figure 2].

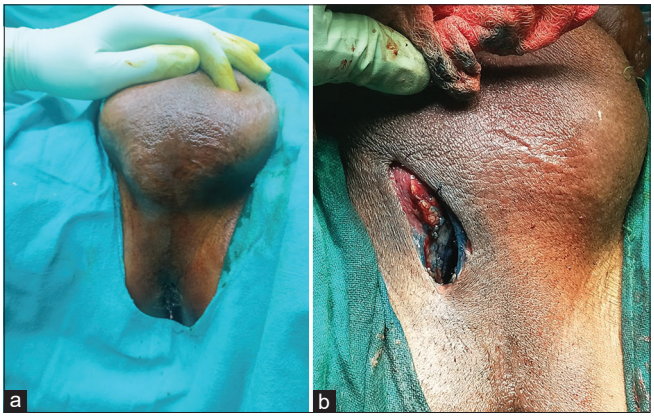

Figure 1: (a) Clinical photograph of root of penis and scrotum showing swelling and features of inflammation and (b) intraoperative photograph showing the abscess cavity.

Based on the clinical and imaging findings, a diagnosis of complicated fistula-in-ano with abscess in the corpus spongiosum was made.

Under intravenous antibiotic cover, a longitudinal incision was given along lateral border of abscess cavity and nearly 200 ml of frank pus was drained. Fistulectomy was then performed. Pus was sent for culture and sensitivity.

Escherichia coli were isolated from pus culture and were found to be sensitive to Piperacillin Tazobactam, Meropenem, and Cefoperazone-sulbactam. Histopathology of perianal fistulectomy specimen revealed acute and chronically inflammed fistulous tract. Patient was kept under injectable antibiotic cover in post-operative period. At 1-month follow-up, the patient had significant relief of symptoms, though he complained of discomfort and mild pain at the initiation of micturition. He has been regularly doing nearly 20 min of sitz bath few times a day, and that has helped a lot in healing of post-operative site and in reducing the symptoms.

DISCUSSION

Bayhan *et al.* reported a case of congenital fistula from penile to gluteal fistula complicated with gluteal and penoscrotal abscess.[2] However, acquired fistula-in-ano leading to penile abscess has not been reported before, to the best of our knowledge.

Penile abscess is a relatively uncommon condition that most commonly presents with localized pain and swelling with or without fever, unlike our case where patient presented with complaints that predominantly pointed toward perianal etiology. Moreover, abscess of corpus spongiosum without involvement of corpora cavernosa is extremely rare, and we found only one report of the same. As per our literature review of 22 case reports published between 2005 and 2019 (searched via Pubmed), 21 of

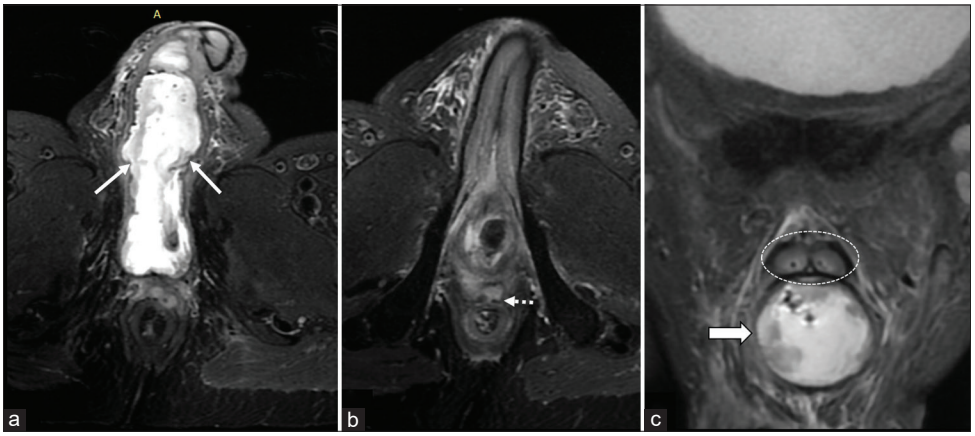

Figure 2: (a) Axial T2-fat saturated magnetic resonance imaging (MRI) image showing T2 hyperintense abscess (arrows) replacing the entire penile shaft (b) axial T2 MRI image showing perianal fistula at 12 o'clock position along external sphincter (dashed arrow) (c) Coronal T2 Fat suppressed image showing the abscess confined to corpora spongiosum (arrowhead) and normal corpora cavernosa (circle).

the reviewed cases documented abscess formation within corpus cavernosa, except one case report by Kubota *et al*, which reported abscess of corpus spongiosum in a patient with rectal cancer.[1]

Etiology and inciting factors for penile abscess are many, including self-intracavernous injection in young to middle aged men, as seen in four of these cases, secondary to suppressed immune system due to various causes such as diabetes, sickle cell anemia, anabolic steroid intake as seen in four cases, post-surgery complication as seen in two of these cases, previous infection or inflammation in four of these cases, neglected penile fracture in three cases, spontaneous or unknown cause in six cases, and following malignancy in one case.[3-10] The youngest patient from 6 to 75 years of age has been described in the literature.[3-10] All of the patients underwent surgical invention along with antibiotics, except one case that was treated solely was antibiotics.[3-10]

CONCLUSION

Penile abscess should be kept in mind as a possible complication of perianal fistula in diabetic and immunocompromised patients presenting with deep pelvic pain.

Teaching points

- MRI is a highly recommended modality due to its ability of accurate delineation of extent of disease and characterization of internal contents of the lesion, thus aiding in treatment planning
- Long standing diabetes leads to immune suppressed state and can lead to formation of abscess in unusual sites
- Timely identification and treatment of fistula-in-ano can prevent abscess formation and complication
- Penile abscess should be kept in mind as a possible complication of perianal fistula in patients presenting with deep pelvic pain.

MCQs

1. Penile abscess more commonly affects
   a. Corpus spongiosum
   b. Corpora cavernosa
   c. Bucks Fascia
   d. Urethra

Answer Key: b

2. Most common organism isolated from penile abscess
   a. *Staphylococcus aureus*
   b. *Escherichia coli*
   c. Anaerobic infection
   d. *Streptococcus*

Answer Key: a

3. All are causes of deep pelvic pain in a patient expect
   a. Prostatitis
   b. Perianal fistula with abscess
   c. Balanitis
   d. Pelvic congestion

Answer Key: c

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Kubota M, Kanno T, Nishiyama R, Okada T, Higashi Y, Yamada H. A case of abscess of corpus spongiosum associated with rectal cancer. Hinyokika Kiyo 2013;59:539-43.
2. Bayhan GI, Metin O, Ardicli B, Karaman A, Tanir G. An interesting fistula tract presenting with recurrent gluteal abscess: Instructive case. Case Rep Pediatr 2015;2015:682842.
3. Kizilkan Y, Duran MB, Peşkircioğlu ÇL. Penile abscess due to intracavernosal injection: A case report. J Urol Surg 2018;5:214-6.
4. Dugdale CM, Tompkins AJ, Reece RM, Gardner AF. Cavernosal abscess due to streptococcus anginosus: A case report and comprehensive review of the literature. Curr Urol 2013;7:51-6.
5. Minagawa T, Kato H, Ogawa T, Uehara T, Ishizuka O. Usefulness of sonourethrography for penile abscess as a result of xanthogranulomatous granuloma in the corpus cavernosum of an adult: A case report. Int J Urol 2015;22:788-90.
6. Siraj M, Yow L, Javed S, Oates J, Mukherjee R, Tolofari SK. A rare case of a multi-focal corpora cavernosal abscess. Urol Case Rep 2018;20:35-7.
7. Capella S, Mahesan T, Taylor J, Chetwood A. Bilateral penile cavernosal abscess secondary to *Escherichia coli*: A case report of a rare diagnosis. Ann R Coll Surg Engl 2019;101:e125-7.
8. Lazarou L, Berdempes M, Markopoulos T, Kostakopoulos N, Spyropoulos K, Mitsogiannis IC. A case of cavernosal abscess after neglected penile fracture and bacteremia. Urol Ann 2019;11:328-30.
9. Gite V, Sankapal P, Singal A, Nikose J. Isolated penile gangrene with penile abscess with pan anterior urethral stricture-a rare case report. J Med Sci Clin Res 2018;6:191.
10. Yamada K, Horikawa M, Shinmoto H. Magnetic resonance imaging findings of penile abscess. Urology 2019;131:e5-6.

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