ALL PERIANAL ABSCESSES ARE NOT NECESSARILY CRYPTOGLANDULAR IN ORIGIN – Beware!

Abstract:

Perianal abscess is the most common abscess that arises from the anal glands in the crypts of the dentate line of anal canal mucosa. Over 90% of perianal abscess originates at the level of the dentate line where the squamocolumnar junction and 4-10 anal glands reside**.** Anorectal abscess due to non-cryptoglandular etiology is uncommon. We present a perianal ischiorectal abscess secondary to a ruptured prostatic abscess in a diabetic patient. Urinary tract infection in diabetes leads to prostatic abscess formation especially patients with voiding disturbances. Anorectal abscesses should be adequately assessed with symptoms, physical examination, laboratory, and imaging, and rarely underlying causes of inflammation of adjacent organs, such as the prostatic abscess, should be kept in mind. It is a rare clinical condition, only a few cases reported in the literature.

Keywords: Prostatic abscess, Perianal abscess, Diabetes mellitus, perineal pain.Perianalpain, Ischiorectal abscess, cryptoglandular infection, dentate line, non-cryptoglandular infection.

Introduction

Perianal abscess due to ruptured prostatic abscess is a rare occurrence. Due to the aggressive antibiotic usage in urinary tract infection, prostatitis to prostatic abscess transformation is infrequent nowadays. However, diabetic patients with voiding disturbances are prone to develop prostatic abscess which subsequently burst to reach perianal spaces and present as perianal abscess. However , immunocompromised individuals, Anorectal foreign bodies, malignancy, Anorectal or colonic tuberculosis, postoperative infection of the Anorectal area, ulcerative

colitis, Crohn’s disease,receptive intercourse, and transplant patients, patients on immunosuppressive drugs, post radiotherapy, sexually transmitted diseases, can lead to perianal abscess of non-cryptoglandular etiology. Detailed history, digital rectal examination, and radiological investigation like CT and MRI pelvis can detect an underlying prostatic abscess in a patient with a perianal abscess.

Case Presentation:

A 42-year-old male presented with pain in the perineum perianal area and had difficulty sitting on the couch.There was also a history of fever with rigor, dysuria frequency, and urgency of micturition of 3 weeks duration. He was treated for a urinary tract infection with antibiotics in two hospitals.

On examination, the patient was in intense perianal pain,febrile, and temperature of 100.2 F. Digital rectal examination revealed a diffuse tender bulge from the 12 O'clock position to the 4 O'clockposition in the perianal area. The prostate gland was tender, enlarged, and boggy. Adiffuse tenderswelling was also noted on the mucosal aspect of the anal canal between 12 O'clock position to 4 O'clock position.

Basic blood investigations revealed a raised total WBC count of 22400, neutrophils 83%. The urine routine showed plenty of pus cells. Urine culture showed heavy growth of Klebsiella pneumoniae sensitive to piperacillin-tazobactam and faropenem. Random Blood sugar was 458 mg/dl. HbA1c is 12%,S.Urea 23 mg/dl, S. creatinine 1.3 mg/dl;estimation showed raised total count, 20-25 pus cells in urine examination.C-reactive protein raised, ultrasound showed boggy prostate with hypoechoic areas. MRI of the perianal area confirmed extensive prostatic abscess arising from the posterior aspect of the left lobe of the prostate gland extending through the left

supralevator space, descends into the intersphincteric space and penetrates the external sphincter to form left ischiorectal abscess.

MRI of the pelvis and perianal area demonstrated a complex multiloculated rim-enhancing fluid collection within the prostate,extends to the left seminal vesicle, reaches the left ischiorectal fossa, and superficial post-anal space of the perianal space after traversing the left intersphincteric space .

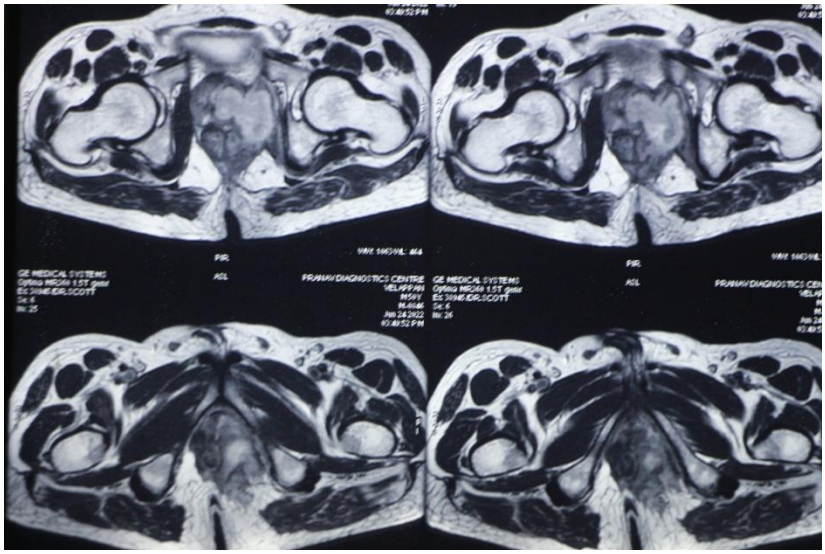

Figure 1:MRI perianal area T_1 Axial image shows Perianal abscess secondary to ruptured prostatic abscess

Figure 2:Cystoscopic drainage of the abscess through the prostatic urethra, black arrow points at yellow-colored thick pus

Cystoscopic deroofing of the abscess cavity was done; around 50 ml of purulent pus was drained. Three -way Foley's catheter was placed for 48 hours and then changed to two-way urethral catheters for seven days. Broad-spectrumantibiotics piperacillin4g and tazobactam 0.5gin combination with meropenem1 gm IV 12hrly instituted for 5 days. No growth of specific bacteria was made in the pus culture sensitivity assay. Tablet Faropenem 200mg two times a day was prescribed for 2 weeks. He becomes symptom-free in 2 days and cured in 3 weeksduration. He has been disease-free for the past 14 months.

Discussion.

Perianal abscess is usually diagnosed by signs like perianal swelling, redness, tenderness, and skin thinning at the summit of the tense underlying abscess**.**Perianal abscess secondary to non-cryptoglandular origin is rare. The diagnosis of prostatic abscess is frequently delayed due to its spectrum of symptoms, which include fever, lower abdominal pain, voiding disturbances, and pain around the anus and perineum. It occurs due to the focal accumulation of pus in the prostate gland and is commonly related to the spread of gram-negative bacilli from the urinary tracts. The prostatic abscess is not diagnosed at an early stage unless tenderness of the prostate parenchyma elicited by digital rectal fistula has also been reported.

Very few cases of prostatic abscess getting ruptured into the perianal spaces are reported. Our case is such a rare presentation. Chee et al[3]. report a prostatic abscess caused by melioidosis and secondary perianal abscess formation, treated outside with antibiotics for 3 weeks. Complicated urinary tract infections are common in diabetic patients by organisms like E.coli, Klebsiella pneumonia can lead to prostatic abscess formation. A Transurethral cystoscopy deroofing method is the best way to treat prostatic abscess due to a non-cryptoglandular abscess in diabetic patients to avoid the spread of the abscess to the perianal region.

Pyogenic prostatic abscesses can also occur due to tuberculosis. The fibrotic form of tuberculous prostatitis may mimic carcinoma, whereas in our case, the prostate was boggy and tender, and pus does not show features of tuberculosis in TB-PCR analysis.

MRI pictures of our patient showed extensive abscess formation arising from the left lobe of the prostate gland on the posterior aspect, crossing its tough capsule, reaching the supralevator space and then descending into the intersphincteric space, reaching the left ischioanal space through

transsphincteric(external sphincter) route. Hence, the route of spread is precisely the opposite of cryptoglandular infection. In cryptoglandular infection, the route of spread is from the dentate line to intersphincteric space and then to ischiorectal or ischioanal abscess through the external sphincter. Supralevator abscesses are generally hard to diagnose clinically; they have unexplained perineal or lower abdominal pain or urinary symptoms.Hence, radiological investigations like CT or MRI of the perianal area can detect an underlying prostatic abscess, its infralevator an extension to reach perianal spaces[6].Prostocutaneous fistula secondary to prostatic abscess also reported by Garg et al[7].

Transurethral drainage is associated with lower recurrence rates, as low as 7% in one study[8]. Cystoscopic drainage of the prostatic abscess is better than the transperineal or transrectal drainage of this atypical complicated perianal abscess. If there is a persistent perianal abscess after the Cystoscopic drainage of the prostatic abscess, then needle aspiration can be attempted on the summit of the prominence or the indurated site or ultrasound-guided.We must avoid the bladder, neck, and anterior prostate on the deroofing procedure and a similar experience shared by Ridgway et al[9].

This patient's transperineal route of abscess drainage would have caused a persistent urinary fistula and ruptured Emphysematous Prostatic Abscess Caused by K1-ST23 Hypervirulent Klebsiella pneumonia[10]. Untreated prostate abscesses can lead to septic emboli in various places within the body, and it is possible for this embolic metastasis to the brain and cause neurological dysfunction[11]. A multidisciplinary approach is needed to drain an extensive and loculated prostate abscess[12].

Conclusion:

Perianal abscess in a diabetic patient can be due to a ruptured prostatic abscess. In addition to symptoms such as fever and rigor, there may also be backache and dysuria symptoms. . Colorectal surgeons should be aware of this entity, culture of the urine with pus detects the bacteria and antibiotics along with drainage procedure is necessary for right management.

Ethical approval: As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

Consent

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

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