



A RARE CASE OF PROSTATIC ABSCESS IN YOUNG MALE AND ITS CONSERVATIVE MANAGEMENT

Urology

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ABSTRACT

Prostatic abscess should be suspected in men with high grade fever with LUTS. Risk factors includes immunocompromised patients ,DM,HIV, prior catheterisation ,genitourinary surgery,increasing age, perurethral instrumentatation ,BOO and medical comorbidities . In young age patients it is not more common but when diagnosed it is very important to manage the abscess with caution because to preserve the sexual function.It may range from micro abscess to multilocular large abscess.Now a days most common etiology is gram negative bacilli like E. coli ,Klebsiella. In old times it was Neisseria gonorrhoea and Staphylococcus aureus. Diagnosis made by thorough clinical history and examination ,urine examination ,TRUS imaging ,CT/MRI pelvis,uroflowmetry . Management includes culture based antibiotics, Intravenous fluids, Dutasteride,urinary bladder drainage ,TRUS guided aspiration ,TUR derooing of the abscess and close monitoring of vitals and antibiotics response. In this case a young male with large multilocular prostate abscess managed with the dutasteride culture based antibiotics ,Intravenous fluids,vitals monitoring and urinary bladder drainage .Patient's prostatic abscess monitored by TRUS USG of prostate with Doppler mode .Patient discharged on oral antibiotic with good urine flow and subsided most of urinary symptoms.

KEYWORDS

INTRODUCTION

Prostatic abscess should be suspected in men with high grade fever with LUTS or a history of immunosuppression such as diabetes or HIV or who do not respond to initial antibiotic therapy after 48 hours. Risk factors for development of abscess include history of prior catheterisation,history of genitourinary surgery ,increasing age, medical comorbidities ,instrumentation,BOO,acute and chronic bacterial prostatitis ,CRF,prostate biopsy ,diabetes ,cirrhosis ,HIV, STD, anal sexual intercourse ,rectal pathology.

The pathologic spectrum of prostatic abscess ranges from micro-abscesses that resolve with antimicrobial treatment alone to large multilocular abscess which require drainage .Although large prostatic abscess can result in severe complication including rupture into periprostatic space,perivesical space, perineum as well as in peritoneum and urinary bladder⁽¹⁾. The spectrum of organisms responsible for causation of prostatic abscess has changed.In the past, Neisseria gonorrhoea and Staphylococcus were common⁽²⁾ Nowadays the organism responsible for prostatic abscess is commonly from gram negative bacterias especially E. Coli, others are Klebsiella pneumonia,Enterococci spp, Mycobacteria spp⁽³⁾

Prostatic abscess is a localized process that usually begins in the peripheral zone of the prostate gland but may spread to other areas⁽⁶⁾.

Thorough clinical history, examination, urine examination,urine culture and sensitivity should be routine in all cases.Confirmation of diagnosis require imaging like transrectal ultrasonography which includes Doppler mode,CT scan and MRI.MRI gives details about pelvic organs,its involvement and any anomaly of genitourinary system.MRI because of its multiplaner capability and high soft tissue contrast is ideally suited for evaluation of the prostate⁽⁴⁾.Prostatic abscess has some characteristic MRI findings, which makes easy to find even small abscess⁽⁵⁾,secondly in patients with deranged renal function we can use MRI in place of CECT.

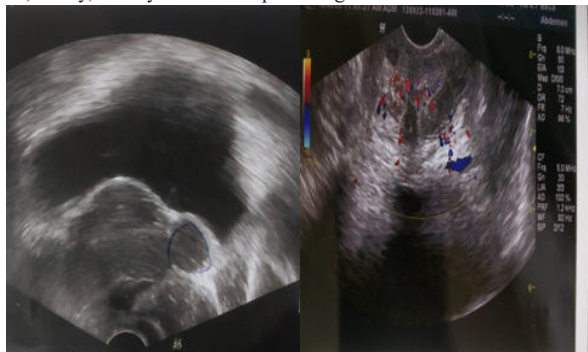
Management includes conservative management with antibiotics, aspiration under TRUS guidance ,TURP derooing of abscess and external drainage, depending upon the side and extent of involvement.

AIMS AND OBJECTIVES:-Management of large prostatic abscess in young male with conservative approach using antibiotics to prevent surgery related complication.

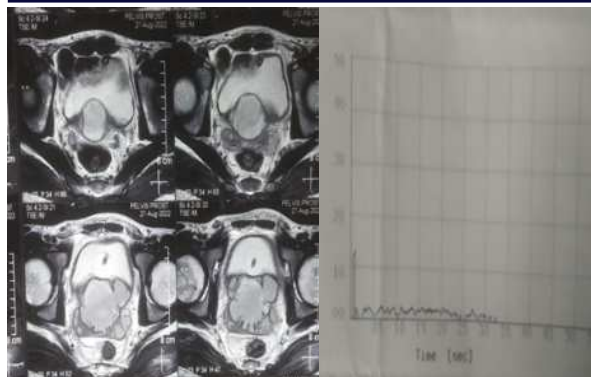
CASE REPORT

A 24 years unmarried, non-smoker, nonalcoholic, labourer patient, presented to our OPD with complaint of dribbling of urine, fever,heaviness of perineum.Patient had a previous history of dysuria and recurrent fever since 2 months for which he had taken medications from local practitioner in form of antibiotics and painkiller. There was no history of DM,tuberculosis, chronic liver or kidney disease. Patient gives history of off and on masturbation since 6 years.There was no history of urethral catheterization,any urogenital trauma or surgery.At the time of admission patient was ill looking, thin built, and dehydrated. Vitals were pulse 108/min,blood pressure was 102/66mmhg,respiratory rate was 16/min. Other systems examination were normal. DRE S/O grade 4 prostate. With tender large boggy prostate,left lobe enlarged more than the right lobe,after finger removal finger stained with stool only which suggests there was no bleeding or pus.Management started with intravenous fluid, IV. Cefoperazone +sulbactam and NSAIDs. Urine culture sensitivity, TRUS for prostate,MRI prostate with pelvis and uroflowmetry and serum PSA advised.

On TRUS examination, prostate was in homogenous with large internal echoes and peripheral vascularity was decreased,size was 142 cc,kidney, urinary bladder and pelvic organs were WNL.



In MRI we used T1W and T2W images with both coronal and sagittal view of pelvis with prostate s/o large inhomogenous multiloculated prostatic abscess with involvement of both seminal vesicles,there was no involvement or rupture of prostate in urinary bladder,rectum or peritoneal cavity,both ureters and kidneys were normal.



Uroflowmetry suggests slow rate intermittent flow.

White blood cell count was 18500 with neutrophilic predominance, serum urea was 68mg/dl and creatinine was 1.4mg/dl, RBS, LFT, and electrolytes were within normal limit. Serum total PSA was raised 15.1ng/dl. Urine culture and sensitivity suggest E.coli growth and was sensitive to Meropenem, Cotrimoxazole, Piperacillin, Levofloxacin.

Management of large prostatic abscess is TUR deroofing or TRUS guided aspiration although we plan conservative management because of risk of sexual dysfunction, infertility. Patient managed with urine culture based antibiotics. Meropenem and Amikacin and tablet Dutasteride to prevent retrograde ejaculation for 10 days with catheter insitu and serial DRE. After 10 days we remove catheter and monitor the patient with visual uroflowmetry flow was good, all symptoms were subsided at the time of discharge. Patient's DRE s/o grade 2 tender prostate and patient discharged on day 15 on tab Cotrimoxazole. On day 20 patient came in OPD, DRE S/O grade 1 prostatomegaly, uroflowmetry was with normal flow, TRUS suggest 34 cc size inhomogenous prostate with 1 ml remaining abscess cavity.



There was no irritative or obstructive symptoms, there was no fever and vitals were normal. Patient was doing well with good urinary flow.

DISCUSSION

Prostatic abscess is an infrequent condition in modern antibiotic era with incidence of 0.5 % to 2.5 % of all prostatic disease⁽⁷⁾ Prostatic abscess can occur in patients of any age but is mainly found in men in their 5th and 6th decade of life⁽⁸⁾. In one of the Indian case series, prostatic abscess is occurring in a younger age group⁽⁹⁾. In our case scenario our patient is also a young male of 24 year of age. The mortality of PA in pre antibiotic era was 10-30%. Neisseria gonorrhoea was the primary organism responsible in 75% cases mainly younger men⁽¹⁰⁾. At present prostatic abscess has been reported primarily in older age group due to gram negative bacilli associated with bladder outlet obstruction and urinary tract infection⁽¹¹⁾. It is thought that the retrograde flow of the contaminated urine within prostate is the most prevalent pathophysiological event. Bacterial hematogenous spread from distant foci was also described, such as from respiratory (bronchitis, otitis), digestive (appendicitis, diverticulitis), urinary tract (perineal, urethral, perirenal) and from skin (furuncles, abrasion) in these cases organism like staph aureus, M. tuberculosis, E. coli, yeast like candida sp. may be found⁽¹²⁾. Clinical diagnosis of prostatic abscess is problematic because of overlapping symptoms and signs occurring with prostatitis. The distinction is important because prostatitis is managed conservatively with antibiotics, whereas prostatic abscess may require drainage. Furthermore, left untreated, a prostatic abscess carries a higher risk of complications, including rupture into the ischio-rectal space, periprostatic space and peritoneum⁽¹³⁾.

Common presenting features are dysuria, fever, suprapubic pain and urinary retention while urine examination usually reveals pus cells.⁽⁴⁾ Imaging techniques, i.e., TRUS or cross sectional imaging modalities are particularly useful for early recognition of abscess formation and assessment of the extension of inflammation. Abscess generally appear as wide hypoechoic zone, sometimes a hypoechoic perilesional halo can be identified around a abscess which is absent in the tumors. Differential diagnosis of smaller abscesses includes congenital prostate and seminal vesical cyst, prostate infarction, and prostate carcinoma⁽¹⁴⁾. CT was found to be useful to assess the extent of suppurative material that had collected in periprostatic tissue and to detect gas in fluid⁽¹⁵⁾. However, MRI due to its higher spatial resolution, better tissue contrast, and multiplanar imaging capabilities, its advantages compared with CT for assessment of the infectious involvement of prostate gland itself. MRI shows hypointense signal on T1WI and hyperintense signal on T2WI⁽¹⁶⁾.

Transurethral drainage or TRUS guided needle aspiration with culture based good antibiotic is treatment of choice when a prostatic abscess diagnosed. The transperineal approach is no longer used due to the risk of impotence as well as hematologic spread of infection associated with this procedure⁽¹⁷⁾. In a case series they found that infection of prostatic abscess is caused by multidrug resistant bacteria related to misuse of antibiotics in the community. In phase of series 75% of E coli were sensitive to commonly used 1st line drugs (ampicillin, ciprofloxacin, co-trimoxazole and gentamycin) and phase 2 more than 75% of E. coli were resistant to 1st line antibiotics and were susceptible to second line (Amikacin, ceftazidime) or third line antibiotics (imipenem and meropenem).

CONCLUSION

Prostatic abscess is a rare disease of prostatic gland but it can be treated as an emergency condition. Good clinical evaluation, rule out all risk factors is very important to aid in diagnosis. TRUS imaging, CT or MRI help in making diagnosis and management surgical or medical management decided based not only on extent, volume of the abscess, other condition may affect and change the plan accordingly like patient age, sexual performance status, fertility issue. Medical management may be an option in a large prostatic abscess with good antibiotics and medical care with limitations like complications or change of plan to surgical recurrence and long duration of treatment.

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