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MANAGEMENT OF PROSTATIC ABCESS - TRUS GUIDED ASPIRATION VS TRANSURETHRAL DEROOFING

Urology

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ABSTRACT

BACKGROUND : Transrectal ultrasound is particularly useful for early recognition and treatment of prostatic abscess. Simple drainage is the treatment of choice done by transrectal ultrasound guided or transurethral deroofing. Prostatic abscess can be drained by both transrectal aspiration and by transurethral deroofing . Both procedures has advantage and disadvantage

AIM AND OBJECTIVE: To compare the outcome of both TRUS guided aspiration and transurethral deroofing of prostatic abscess.

METHODS AND MATERIALS: This a randomized , clinical study . Patient admitted with features of fever with or without supra pubic pain or /with tender and fluctuant swelling in prostate in our hospital from JAN 2016 to DEC 2017 are evaluated for prostatic abscess by TRUS or MRI . Patient are randomly selected and undergone either of TRUS guided aspiration or transurethral deroofing done . All the patient are screened by both pre and post drainage TRUS . Urine culture and associated co morbidities are noted . Drainage fluid sent for culture sensitivity. Post drainage complications in both procedure are compared .

RESULTS : All patient had abscess size more than 20 cc by TRUS. Transurethral drainage has complications of retrograde ejaculate (33%),incontinence (33%) , no residual abscess and bulbar urethra stricture urethra(one case). TRUS guided aspiration has complications of residual (60%) and no retrograde ejaculate and incontinence

CONCLUSION: TRUS guided aspiration has less complications except for high chance of residual abscess requiring reaspiration and long hospital stay compared with transurethral drainage . TRUS guided aspiration has less complications compared to with transurethral drainage. Transurethral drainage has short hospital stay and complete cure of disease .

KEYWORDS

INTRODUCTION :

Prostatic abscess is uncommon in clinical practice due to early use of antibiotics . Due to increase in incidence of diabetes mellitus and immunosuppressive patients , incidence of prostatic abscess is also increasing .It is often misdiagnosed and improperly treated leading to serious and life threatening complications[1,2,3]. Transrectal ultrasound is particularly useful for early recognition and treatment of prostatic abscess. Simple drainage is the treatment of choice done by transrectal ultrasound guided or transurethral deroofing. Prostatic abscess can be drained by both transrectal aspiration and by transurethral deroofing. Both procedures has advantage and disadvantage.

AIM AND OBJECTIVE

To compare the outcome of both TRUS guided aspiration and transurethral deroofing of prostatic abscess.

To study and compare both the procedure relating to hospital stay,post operatve complications, recurrence and recollection of abscess.

METHODS AND MATERIALS :

This a randomized , clinical study . Patient admitted with features of fever with or without supra pubic pain or /with tender and fluctuant swelling in prostate in our hospital from JAN 2016 to DEC 2017 are evaluated for prostatic abscess by TRUS or MRI . Number of patient included in the study is 15, all were of low socioeconomic status. All patient diagnosed with prostatic abscess of size more than 1cm are included in our study. Two patients are of post turp status done 1 week back are included in the study. Patient are randomly selected and undergone either of TRUS guided aspiration or transurethral deroofing done . All the patient are screened by both pre and post drainage TRUS . Urine culture and associated co morbidities are noted. Drainage fluid sent for culture sensitivity. Post drainage complications in both procedure are compared .

RESULTS :

Table 1 - Comparing The Two Procedures

Procedure	TRANSURETHRAL DRAINAGE	TRUS GUIDED
Number of cases	6	9
Pt with diabetes	6	9
Duration of procedure	45 min	5-10 min
Residual abscess	0	4 cases
Duration of hospital stay	2-3 days	6-7 days
Repeat procedure	0	Twice – 3, thrice - 1
Post op pain (VRS)	mild	Moderate
Retrograde ejaculation	2	0
Incontinence	2	0
Stricture	1	0

Patients with prostatic abscess were of median age of 40 . All patient with diabetis had uncontrolled blood glucose level. Few patients say that they had normal glucose level prior to prostatic abscess. All the patients had unilocular abscess observer with TRUS. Average volume of abscess was 59.2 , the maximum was 80 cc and the minimal was 26 cc. Comparing the two procedures patient are comfortable with TRUS guided aspiration done immediately after TRUS . Procedure time is short and no need for anaesthesia or lithotomy position. But patient undergone TRUS has high chance of residual abscess requiring reaspiration about 60 %. In Transurethral deroofing apart from positioning,patient becomes pain free , less chance of residual abscess and duration of stay is short .

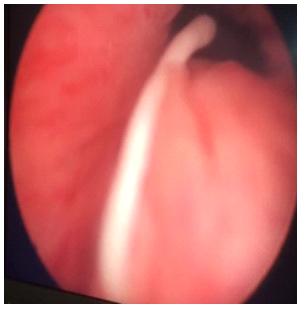

Fig1 :transurethral deroofing

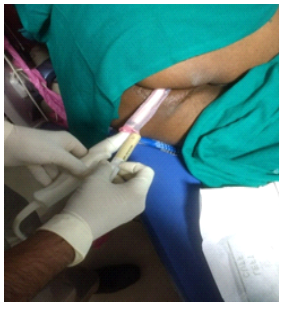

fig2: TRUS guided aspiration

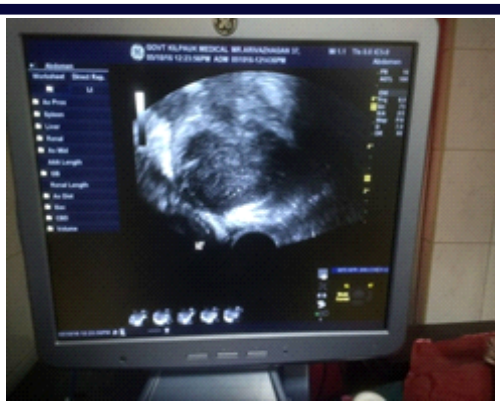

Fig3: hypoechoic lesion inTRUS

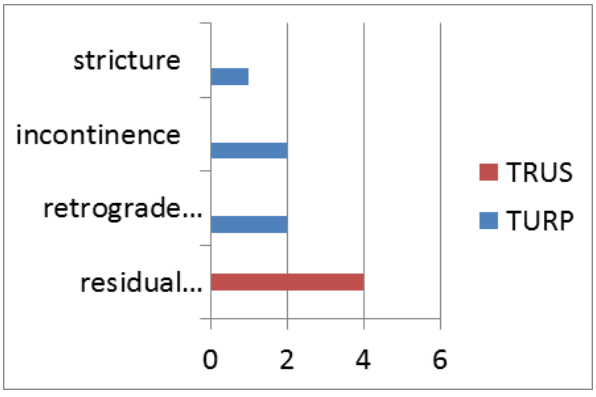

fig4- comparing the compliction of both procedure

DISCUSSION :

Prostatic abscess is an uncommon clinical entity seen in elderly men. The signs and symptoms of prostatic abscess are fever, chills, urinary frequency, acute urinary retention, dysuria, perineal or low back pain, and hematuria[4]. The findings on a digital rectal examination can often detect fluctuant , boggy mass. The signs, symptoms, and the physical examination of prostatic abscess are similar to those of acute bacterial prostatitis thus, it is difficult to diagnosis prostatic abscess alone. However, it is very important to distinguish between acute bacterial prostatitis and prostatic abscess, because the therapeutic approach for each is different[5].

Numerous factors have been described in the literature in association with prostatic abscess formation . Indwelling catheters, a recent prostate biopsy, and instrumentation of the lower urinary tract can be risk factors for prostatic abscess[5]. Diabetes mellitus is the most important comorbidity associated with prostatic abscess. Early diagnosis and treatment of prostatic abscess is warranted to prevent complications such as sepsis, cutaneous fistula, and death[7].

E.coli is the causative organism in majority of cases[8]. Bacterial hematogenous spread from distant foci has also been described, such as from respiratory (bronchitis, otitis), digestive (appendicitis, diverticulitis), and urinary tract (perirenal abscess) infections or from the skin (furuncles, abrasions). In these cases, germs like S. aureus, Mycobacterium tuberculosis, E. coli, and Candida sp. may be found[9]. TRUS can be used initially and easily to make a diagnosis of prostatic abscess[10]. However, initial stages of abscess formation may not be identified with US[11]. CT or MRI may be used for diagnosis and treatment of prostatic abscess, but it is costly and usually not required[12,13,14]. The most common TRUS finding is one or more hypoechoic areas with well-defined and thick walls containing thick liquid fluid[15]. A monofocal abscess of less than 1 cm in diameter be treated with intravenous broad-spectrum antibiotic therapy and a suprapubic catheter. Surgical drainage should be performed for multifocal abscesses, abscess greater than 1 cm in diameter, septic shock, recurrent abscess, or in patients responding poorly to antibiotics for 3 days or longer[16]. Lim et al.[17] reported successful treatment of prostatic abscess in 12 of 14 patients with TRUS-guided needle aspiration ,Gan[18] suggested that TRUS-needle aspiration is a feasible alternative to transurethral drainage.

In this study we compared the outcome and complications associated with transurethral deroofing and TRUS – guided needle aspiration. Of the 15 cases of prostatic abscess diagnosed clinically and by TRUS were managed with transurethral deroofing or TRUS guided needle aspiration randomly. All patient had abscess size more than 20 cc by TRUS. Transurethral drainage has complications of retrograde ejaculate (33%),incontinence (33%) , no residual abscess and bulbar urethra stricture urethra(one case). TRUS guided aspiration has complications of residual (60%) and no retrograde ejaculate and incontinence. Because no residual abscess detected in transurethral deroofing group there is reduced hospital stay compared to TRUS group. TRUS group has high chance of recurrence and residual abscess.

CONCLUSION:

Though prostatic abscess is uncommon ,can be seen strongly associated with diabetes mellitus. TRUS guided aspiration has less complications except for high chance of residual abscess requiring reaspiration and long hospital stay compared with transurethral drainage . TRUS guided aspiration has less complications compared to with transurethral drainage. Transurethral drainage has short hospital stay and complete cure of disease . It can cause external sphincter damage, retrograde ejaculation, incontinence and post op bulbar urethra stricture .

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