



## LOCALLY ADVANCED CARCINOMA PROSTATE PRESENTING AS ACUTE RETENTION OF URINE – A CASE REPORT

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### ABSTRACT

Acute urinary retention (AUR) is a common complication of a neoplastic prostate. Prostate cancer is one of the most common epithelial tumors in older men. Palliative TURP ("channel" TURP), is transurethral resection of prostate tissue in a patient with metastatic or locally advanced and/or previously treated prostate cancer to alleviate obstructive voiding symptoms (e.g. AUR). The estimated incidence of urinary retention in patients with advanced prostate cancer is nearly 13.0%. We report a case of 77 year old patient presenting with acute urinary retention to our emergency department and was further diagnosed with adenocarcinoma of prostate with a Gleason score of (5+4=9). We present this case to highlight the efficacy of Bilateral Orchiectomy and Channel TURP in relieving urinary retention in patients with advanced prostate cancer presenting with urinary retention or a high post-void residual urine volume (PVR).

**KEYWORDS :** Acute Urinary Retention (aur), Channel Turp , Orchidectomy , prostate Cancer , Prostatic Adenocarcinoma, Gleason Score .

### INTRODUCTION :

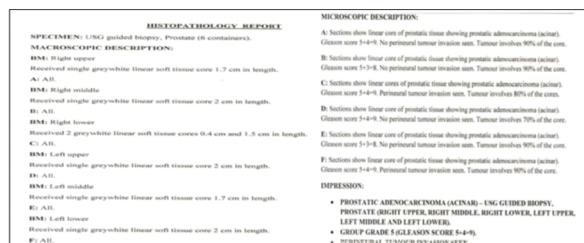
Prostate cancer rarely causes symptoms at an early stage. The presence of symptoms usually suggests locally advanced or metastatic disease. The estimated incidence of urinary retention in patients with advanced prostate cancer is nearly 13.0%. Besides acute urinary retention (AUR), chronic urinary retention, bladder stones, and hydronephrosis are the most frequent complications of locally advanced prostate cancer. Avoiding further complications, curing retention, and improving the health-related quality of life of these patients are often the main aims of treatment. There are various treatment options for LUTS/urinary retention including: minimally invasive procedures (stents, laser, etc.), catheterisation, hormonal manipulation, bilateral orchiectomy and palliative TURP (pTURP). The disadvantage of Androgen suppression is that it may take 2–3 months, as there is a delay between hormonal manipulation and tumour response. Bilateral Orchiectomy and Channel TURP help in quicker symptomatic relief when compared to other modalities. Despite the availability of various multimodality treatment options, there is no clear protocol for management of patients with advanced prostate cancer presenting with AUR or chronic urinary retention. Therefore, We present this case to highlight the efficacy of Bilateral Orchiectomy and Channel TURP in relieving urinary retention in patients with advanced prostate cancer presenting with urinary retention or a high post-void residual urine volume (PVR).

### CASE DISCUSSION:

A 77 years old male, presented with acute retention of urine associated with burning micturition, dribbling of urine, difficulty in passing urine and increased frequency of micturition. Patient was catheterized immediately and urine was drained. He is known case of Diabetes mellitus since 7 years / Hypertension since 30 years / Vitamin -D Deficiency / Acid peptic disease on regular treatment. Subsequently patient was thoroughly evaluated. On evaluation the serum PSA was found to be elevated (78.9 ng/ml). Surgeon, Urologist, Physician, Cardiologist and Diabetologist opinion obtained and advice followed. Urologist advised USG

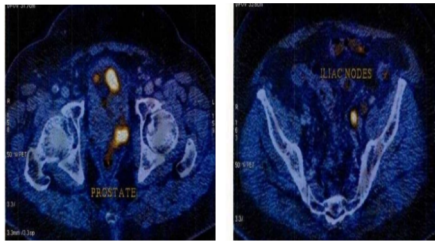
Guided Prostate Biopsy And Same Was Done Which Showed Prostatic Adenocarcinoma. Pet Ct Whole Body Done Which Showed Ill Defined Metabolically Active Non Circumscribed T2 Hypointense Lesion Replacing Peripheral And Transition Zone Of Base, Mid Segment And Apex Of Prostate With Moderately Hypointensity On Adc Map. Mildly Metabolically Active Prominent Bilateral Internal, External Iliac, Left Obturator And Common Iliac Lymphnodes. Focal Increased Metabolic Activity In Right Posterior D10 Vertebra With No Obvious Lytic / Sclerotic Lesion – Indeterminate.

The nature of the disease, condition of the patient and the need for surgical treatment options (Channel TURP / Bilateral Orchiectomy) well explained to the patient and family members. After obtaining fitness for surgery from Cardiologist, Diabetologist and Anesthetist, with informed oral and written high risk consent, patient was subjected to Bilateral Orchiectomy with Channel Trans urethral resection of prostate. The resected specimen sent for histopathological examination. Post operative period was uneventful. Post operatively patient was treated in ICU with IV antibiotics, Anti-Diabetic, Anti-Hypertensive and other supportive medications. Patient was shifted to ward as he was clinically stable. Foley's catheter removed. Patient is voiding urine normally per via naturalis and is being discharged in a stable condition with advice to followup with Oncologist and Urologist with HPE report for further management and review with Diabetologist and Cardiologist as outpatient for Glycaemic status & Blood pressure control



**FIGURE -1: USG GUIDED PROSTATE BIOPSY REPORT AND**

biopsy done which showed as prostatic adenocarcinoma



**FIGURE -2 : PET SCAN SHOWING TUMOUR UPTAKE OF 18FDG IN THE PROSTATE GLAND AND INVOLVED LYMPHNODES**

### DISCUSSION:

Prostate cancer is one of the most common epithelial tumors in older men. Among all cancers that arise in the prostate the most common is adenocarcinoma accounting for more than 95%. The etiology of prostate cancer remains unknown and no definite carcinogen is known to be responsible; a viral etiology has been suggested but not verified. It is possible that alteration in estrogen & androgen balance and metabolic alteration in prostate may play a role but exact clinical significance in these changes remains to be established. A probable role for genetic factor in cancer prostate has also been uncovered previously in familial aggregations. The management of carcinoma prostate is based on clinical examination, laboratory investigations such as serum PSA and histopathology and bone scan with treatment and close follow up of the patients. For metastatic prostate cancer bilateral orchiectomy has remained the "gold standard" of therapy since its introduction by Huggins et al in 1941. But the median survival of the patient with metastatic disease is approximately two years and eighty percent of the patients die within five years despite therapy. Testes are responsible for production of 95% of circulating androgens in the form of testosterone. Remaining 5% of circulating androgens are produced by the adrenals through production of dihydroepiandrosterone and androstendione. The androgens are secreted by the Leydig cells of the testes upon stimulation by leutinizing hormone (LH) secreted by the pituitary, in turn responding to the LH-RH released by the hypothalamus. Within prostatic cells, testosterone is converted to DHT by the action of 5 - reductase. DHT is the active molecule, which binds to the androgen receptors in the prostatic cells and exerts its various actions. Advanced prostatic cancer in India is mainly managed by bilateral scrotal orchiectomy and palliative TURP. The prostate gland is hormone dependent and is controlled by circulatory testosterone, which is synthesized and secreted from the testes up to 90-95%. The ablation of trophic androgen by medical or surgical castration has been the standard therapy for carcinoma of prostate for the last fifty years. The prostatic tumour responds in many ways such as apoptosis, decrease in cell proliferation etc. the androgen especially formed in adrenal gland, is thought to be more important and is still a continuous stimulus of the prostate gland containing receptors for androgen hormone. Bilateral orchiectomy, which is the most effective method for reducing the circulating testosterone, gives the symptomatic relief for up to 80-85%.

Chang-Chi Chang, et-al - a success rate of 69% was reported in 35 men with prostatic carcinoma treated with orchiectomy; however, 29% of patients required TURP within 90 days after orchiectomy. In their study, combined palliative TURP and bilateral orchiectomy was performed in 10 patients, and repeat palliative TURPs to relieve urinary retention in 3 (30%).[1]

The fact that orchidectomy reduces the size of a malignant prostate gland was noted in 1942 by Chute3. In his study of 13

patients with urinary retention secondary to carcinoma, nine were able to void following bilateral orchidectomy. Fleischman and Catalona2 reported 35 patients with prostatic carcinoma presenting with urinary retention and 24 patients (68%) were able to void after orchidectomy alone. In our case patient able to void two weeks after bilateral orchidectomy and channel turp alone. TURP in a large malignant gland can be technically difficult. The prostatic urethra may be rigid and both the verumontanum and external sphincter hard to identify with the associated risk of incontinence. Even though channel turp has a risk of disseminating prostate cancer, when combined and done carefully can immediately relieve the obstructing symptom such as AUR.

### CONCLUSION:

We are presenting this case to highlight that prostate cancer being one of the cancers occurring in elderly male patients presents with one of its complication , Acute urinary retention(AUR) as its main presenting complaint. Prompt clinical, biochemical ,radiological expertise help in diagnosis of prostate cancer and lead to faster treatment modalities. There are various modalities of treatment available based on Gleason score and stage of the disease . we would like to emphasize that Bilateral Orchiectomy and palliative TURP help in relieving retention of urine in patients in adenocarcinoma prostate.

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