

LYMPHOEDEMA AS A PRESENTATION OF CANCER PROSTATE AND IT'S RESOLUTION AFTER ANDROGEN DEPRIVATION THERAPY (ADT)- A CASE REPORT.

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ABSTRACT

Lymphoedema is a very rare presentation of cancer prostate. We describe a case where a patient who presented with lymphoedema, was investigated, and found to have cancer of the prostate with metastatic pelvic and cervical lymphadenopathy. Common sites of metastases of prostate carcinoma include bone (Bone pain, with or without pathologic fracture) and regional lymph nodes (Lower extremity pain and edema due to obstruction of venous and lymphatic tributaries by nodal metastasis). The patient was treated with ADT (Androgen Deprivation Therapy), and this resulted in complete resolution of lymphedema of lower extremity and regression in size of pelvic lymph nodes. This case report is unique, because lymphoedema is a rare presentation of the disease, and ADT has not been shown to result in the resolution of lymphoedema.

KEYWORDS : ADT, Biclutamide, Carcinoma Prostate, Lymphadenopathy

Introduction:

Prostate cancer is the development of cancer in the prostate, a gland in the male reproductive system. Most prostate cancers are slow growing; however, some grow relatively quickly.^[1] Approximately 50% of patients have metastases at presentation, most commonly spreading to the axial skeleton, the nodes of the pelvis and the retro peritoneum.^[2] Inguinal or pelvic lymphadenopathy if present can be due to metastatic disease, lymphoma, or leukaemia, where biopsy is diagnostic. Once prostate cancer has metastasised it's unlikely to be cured and can only be controlled.

Androgen deprivation therapy (ADT), also called androgen suppression therapy, is an anti hormone therapy mainly used in treating prostate cancer. Prostate cancer cells usually require androgen hormones, such as testosterone, to grow. ADT reduces the levels of androgen hormones, with drugs or surgery, to prevent the prostate cancer cells from growing.^[3] The therapy can also eliminate cancer cells by inducing androgen deprivation-induced senescence.^[4] Lowering androgen levels or stopping them from getting into prostate cancer cells often makes prostate cancer shrink or grow more slowly for a time.

In our case bilateral subcapsular orchidectomy & Androgen Deprivation Therapy (ADT) by Biclutamide was performed in patient with advanced prostate carcinoma and there was complete resolution of lymphedema of lower extremity and regression in size of pelvic lymph nodes.

Case History:

A 64 year old male patient presented to the surgical Out Patient Department (OPD) with chief complaints of painless swelling in left iliac region since 4 months, generalized swelling of left lower limb since 2 months and another painless swelling in cervical region since 2 months. The swelling in lower extremity was generalized, non pitting and with no sensory neural deficit with intact motor function and distal pulses were felt. On physical examination the iliac swelling was ovoid, 4x 4cm, firm in consistency and fixed. Cervical swelling was also having similar features with size of 2x2cm. On per rectal examination there was a nodule, in the left lobe of prostate, firm to hard in consistency. He was known case of hypertension and diabetes and was on regular treatment.

Investigations:

The RFT of patient were deranged with Serum creatinine level of 2.1mg/dl and blood urea 51mg/dl. Haemoglobin was 10.9gm/dl. Liver Function tests (LFT) and Electrolytes were in normal range.

FNAC of both, the iliac and cervical swellings was done, which was suggestive of metastatic deposits of adenocarcinoma, suspicion of prostatic carcinoma was made, and plain CT abdomen with PSA was done. CT abdomen showed bilateral hydronephrosis with medial deviation of upper ureter and multiple enlarged left inguinal lymph nodes, left paraaortic and left external iliac lymph nodes were noted.

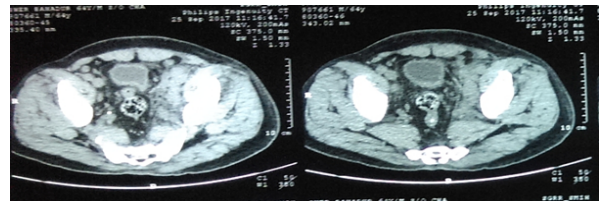


Image 1 CT scan image showing enlarged lymph nodes esp. on left side.

PSA was 289.00ng/ml, prostatic biopsy was taken which came out to be prostatic adenocarcinoma, and so final diagnosis of advanced prostatic carcinoma stage IV was made.

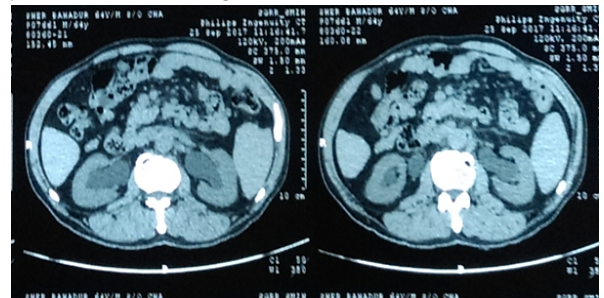


Image 2 CT Scan image showing hydronephrosis, secondary to pressure from enlarged iliac lymph nodes.

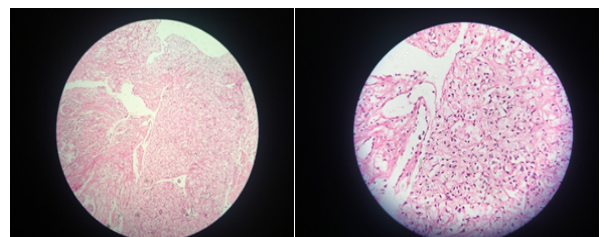


Image no. 3 of Trucut biopsy from a prostatic nodule, of the patient, which showed features of Carcinoma prostate.

Treatment:

The Patient was planned for Androgen Deprivation Therapy (ADT) and therefore bilateral Subcapsular Orchidectomy with DJ stenting was done under spinal anaesthesia.

Outcome and Follow-Up:

After postoperative recovery, patient was put on oral Bicalutamide 50mg once a day. After one week complete resolution of lower extremity edema was observed. On follow up after 6 weeks plain CT abdomen along with PSA was done, CT showed regression of inguinal lymph nodes and PSA level were decreased to 0.192ngm/ml (Normal range 0-4ngm/ml)

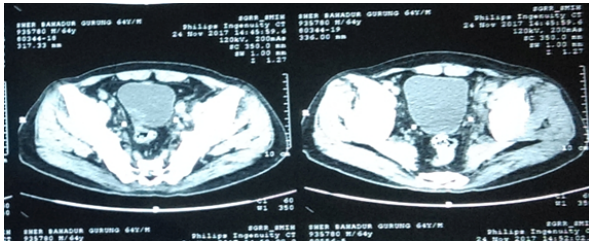


Image no. 4: Followup CT scan, showing resolution of lymphadenopathy.

Discussion:

Carcinoma Prostate usually spreads by direct, lymphatic and haematogenous dissemination. Lymphatic spread usually occurs to the external and internal iliac, obturator, presacral and hypogastric nodes, and then to para-aortic lymph nodes.^[5,6] Haematogenous spread occurs most commonly to bone, lungs and liver.^[5] Carcinoma Prostate metastasising to inguinal lymph nodes has been reported preoperatively in two patients,^[6,7] and 12 years after radical prostatectomy and pelvic lymph node dissection on hormonal therapy in one case.^[8] Inguinal lymphadenopathy can also occur due to metastasis from the urethral, penile and anal canal, and from lower limb cancers, lymphoma, leukaemia, infections and sexually transmitted diseases.^[9]

Androgens are required for normal growth and function of the prostate, and are also necessary for prostate cancers to grow. Anti androgens, are drugs that compete with androgens for binding to the androgen receptor and thus reduce the ability of androgens to promote prostate cancer cell growth. Most prostate cancers need the hormone testosterone to grow. Bicalutamide blocks testosterone from reaching the cancer cells. Without testosterone the prostate cancer may shrink or stop growing. ADT is universally accepted as first-line treatment of symptomatic metastatic prostate cancer. Cervical lymph node metastasis in cases of prostate cancer should be treated as a systemic disease and the primarily treated with androgen ablation.^[10] Bilateral subscapular orchidectomy, followed by androgen blockade with bicalutamide (hormonal therapy) has been shown to be of benefit even in advanced stages of the disease. Chitale et al. report a similar case that received regular hormonal therapy and remained symptom-free for 9 years.^[11]

Conflict of interest-None.

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