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UNUSUAL INITIAL PRESENTATION OF CARCINOMA PROSTATE WITH INGUINAL LYMPH NODE METASTASIS AND LOWER LIMB LYMPHEDEMA: A CASE REPORT

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ABSTRACT **Introduction:** Prostate adenocarcinoma is clinically diagnosed through symptoms and routine serum PSA levels. Prostate cancer metastasises to the obturator lymph nodes, internal and external iliac lymph nodes. Incidence of inguinal lymph node metastasis is only 9%. Ca Prostate metastasising to inguinal lymph nodes in the absence of primary symptoms is usually uncommon. We report a rare case of metastatic prostate adenocarcinoma without any obvious primary only presenting with lower limb lymphedema secondary to the bulky inguinal lymph node metastasis. **Case Presentation:** A 72-year-old male presented with bilateral inguinal swellings along with non-pitting edema of left lower limb for last 6 months. USG showed bilateral inguinal lymphadenopathy. Excisional biopsy with IHC showed metastatic prostatic adenocarcinoma. PET/CT showed no uptake in prostate, and uptake on both side of diaphragm, lower paratracheal, pre-vascular, AP window and subcarinal nodes; along with retroperitoneal, bilateral internal and external iliac and bilateral inguinal lymph nodes. Serum total PSA was 524 ng/ml, and TRUS guided 12 core biopsy of prostate confirmed acinar adenocarcinoma of prostate (Gleason score-5+4=9 and Gleason grade group-5) **Conclusion:** Inguinal secondaries may be the initial presenting symptom in rare cases and should be suspected in old males specially if the patient has lower urinary tract symptoms.

KEYWORDS : Metastatic Adenocarcinoma, Initial Symptom, Inguinal Lymphadenopathy.

INTRODUCTION

Prostate adenocarcinoma is usually clinically diagnosed through symptoms and routine serum PSA levels, but in some cases, patients may not present with symptoms or signs of the disease. Approximately 50% of patients have metastases at presentation, most commonly to the bones and regional lymph nodes [1] Prostate cancer spreads via lymphatics from the obturator lymph nodes to the presacral, lateral sacral, internal and external iliac lymph nodes. The presence of lymph node metastases is a poor prognostic sign, and mortality rates are often higher [2] Incidence of inguinal lymph node metastasis is only 9% [3] Ca Prostate metastasising to inguinal lymph nodes in the absence of primary symptoms is usually uncommon. As commonly inguinal lymphadenopathy is a manifestation of carcinoma, metastatic disease, lymphoma, and leukaemia. Thus, biopsy of the lymphadenopathy is an effective diagnostic tool. We report a rare case of metastatic prostate adenocarcinoma without any obvious primary only presenting with lymphedema secondary to the bulky inguinal lymph node metastasis.

Case Report

A 72-year-old male presented with generalized weakness, bilateral inguinal swelling along with swelling of left lower limb for last 6 months. No history of previous surgery or radiation therapy in the past. There was no complain of lower urinary tract symptoms.

On physical examination, afebrile, ECOG- 1, stable vitals, weight=57.4 kg and BMI-21. Per abdominal findings were normal except for palpable bilateral discrete inguinal lymph nodes. Right side solitary-3 cm diameter; left side- two nodes palpable-2 cm in diameter. Left lower limb non-pitting edema was present. Right inguinal hernia was present (reducible/cough impulse present/non tender). On digita rectal examination; grade 2 prostate enlargement present, firm consistency and no nodule.

USG scrotum- right inguinal hernia, and bilateral large inguinal lymphadenopathy (right-33x15 mm; left-25x18mm and 11x15 mm) with subcutaneous edema of left inguinal area. Planned for excisional biopsy.

All routine investigation of blood was normal. Routine examination of urine was normal and culture urine was sterile.

Routine ECG showed feats of ischemic changes of LAD territory along with some atypical changes. Echocardiography- EF 54%, concentric LVH, dilated LA, mild MR, hypokinetic right wall motion abnormality.

Excisional biopsy of left inguinal lymph node was done- metastatic adenocarcinoma was found. IHC done showed tumor cells of prostatic origin.

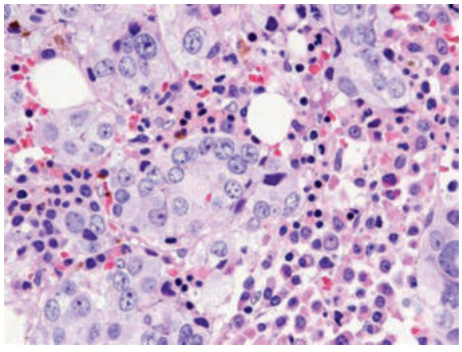
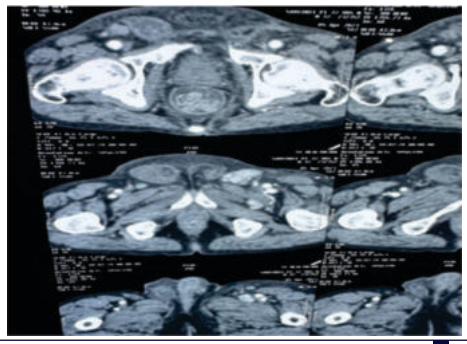


Fig1. Showing HPE Of Inguinal Lymph Node With Metastatic Adenocarcinoma

PET/CT was done- no hypermetabolic lesion found in prostate. Hypermetabolic nodes on both side of diaphragm, B/L lower paratracheal, pre-vascular, AP window and subcarinal nodes was noted. Increased FDG activity in right retro-crural, coeliac, mesenteric, retroperitoneal, Bilateral internal iliac, bilateral external iliac and bilateral inguinal lymph nodes (size=3x2.9 cm; SUV max=6.0) were noted. Hypermetabolic activity in D3 vertebra was also noted.

CECT whole abdomen was done- multiple discrete and conglomerated inguinal lymph nodes(left>>right) along with bilateral iliac, presacral, para-aortic nodes. Prostate- enlarged, 54 cc. Right inguinal hernia with bowel loops as content.



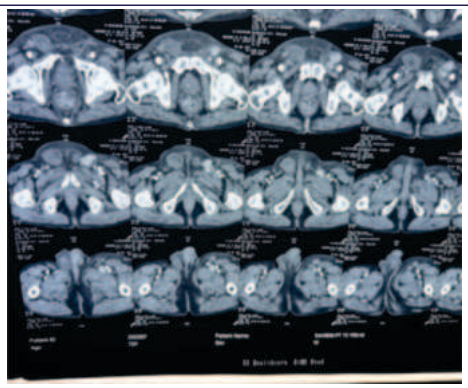


Fig.2 and 3. CECT Showing Bilateral Enlarged Inguinal Lymph Nodes (left>>right)

Serum total PSA was 524 ng/ml. Patient went TRUS guided 12 core biopsy of prostate- Acinar adenocarcinoma of prostate. 8/12 cores positive. Gleason score-5+4=9 and Gleason grade group=5. LVI was absent in all cores. Intraductal Ca component was absent in all core. Perineural invasion present in 3/12 cores. He was started with androgen deprivation therapy with combination of docetaxel (75 mg/sqm), bicalutamide (50 mg OD) and prednisolone (5 mg BD).

DISCUSSION

Ca 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[4]. It mainly spreads through the lateral route, to the obturator nodes (medial chain of external iliac), then to the middle and lateral chains of the external iliac nodes. The second most common route is the internal iliac (hypogastric) route. Also, drainage occurs along an anterior route, via nodes located anterior to the urinary bladder and a presacral route anterior to the sacrum and the coccyx. Lymph node spread tends to be ipsilateral in patients with a primary tumour affecting only one lobe of prostate.[5]

Inguinal lymphadenopathy presenting as initial symptoms is very rare. Jackson et al[3] reported that 9% of patients presenting with pelvic nodal enlargement had inguinal lymph node metastasis.

Many uncommon routes of lymphatic drainage have been reported, such as the periprostatic and seminal vesicle nodes, gonadal vessels, mesenteric and mesocolic nodes, posterior iliac crest nodes and inferior phrenic nodes.[2] Postoperatively, inguinal lymphadenopathy may arise due to preoperative aberrant lymphatic drainage of prostate and postoperative distortion of the lymphatic drainage.[2]

Inguinal lymphadenopathy usually occurs due to metastasis from the urethral, penile and anal canal, and from lower limb cancers, lymphoma, leukaemia, infections and sexually transmitted diseases.

In the case presented; left-side inguinal node enlargement with left lower limb lymphedema with absence of lower urinary tract symptoms, is an uncommon initial presentation of advanced prostate cancer.

The literature available was reviewed to find similar cases of atypical and unusual presentation of metastatic prostate adenocarcinoma revealing six such reports. In two published cases, there was a bilateral inguinal metastatic node. Lower urinary tract symptoms were not present in any of the cases reviewed.

Literature review of reported cases of inguinal lymphadenopathy as initial presentation in prostate adenocarcinoma

Reference number	Author	Year	Patients' age	Sidedness	LUTS	PSA
[5]	Ekaqa et al.	2019	53	Bilateral	Mild obstructive	35 ng/ml
[6]	Tunio et al.	2011	66	Bilateral	Frequency	116 ng/ml
[7]	Doreswamy et al.	2015	66	Left	Frequency, dysuria, weak stream	>50 µg/l
[8]	Slavis et al.	1990	60	Left	Not reported	-
[9]	Huang et al.	2003	77	-	Not reported	7.8 ng/mL
[10]	Rosa M et al.	2007	47	-	Not reported	528.90 ng/ml
This report	Sofroniewska et al.	2024	63	Right	None	>400 ng/ml

CONCLUSION

Prostatic adenocarcinoma usually presents with urinary or bony symptoms along with multiple pelvic lymph nodes on imaging; but metastatic inguinal nodes in absence of LUTS as initial presentation is rare.

Thus, inguinal secondaries may be the initial presenting feature in rare cases and should be suspected in an older male specially if the patient has lower urinary tract symptoms. Additionally, this also underscores the importance of clinical examination in these patients.

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