# Metastatic Prostate Adenocarcinoma Presenting with Bilateral Inguinal Adenopathy

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## ABSTRACT

Metastatic prostate adenocarcinoma generally manifests either as painful bone metastases often in axial skeleton or as bulky iliac and para-aortic lymphadenopathy. The inguinal lymphadenopathy is very rare. Here-in we present an unusual case of metastatic prostate adenocarcinoma with bilateral inguinal adenopathy.

*Key words* Prostate adenocarcinoma, Metastatic inguinal lymphadenopathy, Rare sites.

#### **INTRODUCTION:**

Prostate adenocarcinoma accounts for approximately 3.4% of all the cancers and ranks 8th in Pakistani males,<sup>1</sup> of whom 70% of patients are diagnosed as advanced metastatic stages.<sup>2</sup> Such cases mostly present with the bone pain, iliac and para-aortic lymphadenopathy, prostatism and urinary retention.<sup>3,4</sup> The primary lymphatic spread of prostate adenocarcinoma most often involves the iliac (external and internal), obturator, pre-sacral and hypogastric nodes, followed by para-aortic lymph nodes.<sup>5</sup> The inguinal lymphadenopathy is very rare manifestation during any stage of prostate adenocarcinoma, especially in absence of pelvic lymphadenopathy or other site of metastases.<sup>6</sup>

Here-in we present a case of prostate adenocarcinoma with bilateral inguinal lymphadenopathy during initial presentation.

#### CASE REPORT:

A 66-years-old male presented in the Oncology clinic with bilateral inguinal swelling for the last 2 months. He also had frequency of urine for 3 months. Physical examination revealed enlarged, hard inguinal lymph nodes of varying size from 2x2 cm to 4 x4 cm on both sides (Fig-I). No other palpable lymphadenopathy or visceromegaly was observed. Digital rectal examination (DRE) showed large prostate with stony hard consistency.

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Dr. Mutahir A Tunio Radiation Oncology Department Sindh Institute of Urology & Transplantation (SIUT), Karachi E mail: drmutahirtonio@hotmail.com Baseline investigation including full blood count, urea, electrolytes, liver function tests and chest xray were normal. Computed tomography (CT) of neck, chest, abdomen and pelvis showed bilateral inguinal and para-aortic lymphadenopathy in absence of pelvic adenopathy and large prostate involving seminal vesicles (Fig-II).



Fig-I: Physical examination showing enlarged, hard inguinal lymph nodes of varying size from  $2x \ 2 \ cm$  to  $4 \ x \ 4 \ cm$  on both sides.



Fig-II: Computed tomography (CT) neck, chest, abdomen and pelvis showed bilateral inguinal and para-aortic lymphadenopathy in absence of pelvic adenopathy and large prostate involving seminal vesicles.

A fine needle cytology of inguinal lymph node revealed metastatic moderately differentiated adenocarcinoma (Fig-III). Serum markers carcinoembryonic antigen (CEA), alpha feto-protein (AFP) and beta human chorionic gonadotrophin were normal. Serum prostate specific antigen (PSA) was 108 ng/ml. Patient underwent trans-rectal ultrasound guided biopsy of prostate which showed prostate adenocarcinoma (Gleason score 3+4=7). Bone scan was done which showed increased uptake in 12<sup>th</sup> thoracic vertebra. He was staged as T3bN2M1a. Patient was started on androgen deprivation therapy {oral bicalutamide 50 mg for a week and monthly subcutaneous leutinizing releasing hormone (LHRH) analogues}. The inguinal lymph nodes were irradiated for pain relief with 12 MeV electrons with radiation dose 3000 cGy in ten fractions over two weeks. Three months later, the serum PSA returned within normal limits and follow up CT scan showed regression of nodal disease. Patient is currently on regular follow-up.



Fig-III: A fine needle biopsy of inguinal lymph node revealed metastatic poorly differentiated adenocarcinoma

## DISCUSSION:

The prostate adenocarcinoma is predominantly a disease of older men above 50 years of age. It most often metastasize to regional lymph nodes (iliac and obturator) and bones by lymphatic and hematogenous spread. Metastases to inguinal lymph nodes is very rare and only few related case reports have been published in medical literature.<sup>5,6,7</sup> The possible explanation of the dissemination mechanism of prostate adenocarcinoma to inguinal lymph nodes is three-fold; (I) retrograde lymphatic spread in the presence of para-aortic lymph nodes (II) prostate cancer cells could reach the inguinal canal via the spermatic cord and (III) ectopic prostate tissue outside the genital-urinary system.<sup>8</sup>

Inguinal lymph nodes do not lie in the lymphatic drainage pathway of the prostate; therefore, inguinal lymphadenopathy is an unlikely early manifestation of metastatic prostate adenocarcinoma and is indicator of very advanced stage and dismal prognosis.<sup>9</sup> The treatment in our patient was the standard hormonal therapy in form of LHRH analogues and palliative radiotherapy for painful inguinal lymphadenopathy. Following the treatment, there was remarkable decline in the PSA value and disease regression was seen.

In differential diagnosis of metastatic inguinal nodes apart from scrotal, vaginal, anal canal and cervical cancers, prostate adenocarcinoma also must be kept in mind by physicians. We emphasize that per abdomen examination, digital rectal examination (DRE) and serum PSA shall be performed to rule out primary of unknown origin in case of persistent inguinal lymphadenopathy. Prompt diagnosis and treatment may affect outcome.

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