

**CASE REPORT****PROSTATE CANCER METASTASIS TO CERVICAL NODE CHAIN-AN UNUSUAL CLINIC-PATHOLOGICAL FINDING****Haissan Iftikhar, Mubasher Ikram, Mohammad Usman Iqbal\*, Shayan Khalid Ghaloo**

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Prostate carcinoma is one of the most common cancers in males all around the world. Head and neck squamous cell carcinoma is amongst the leading carcinoma (HNSCC) in men especially in the sub-continent. There are around 150 lymph nodes on either side in the neck and cervical lymph nodes are a common site for head and neck malignancies to metastasize however carcinoma of prostate may in rare cases metastasize to cervical chain, therefore warranting a neck dissection. In case of unknown primary of head and neck extensive work up is required to find the primary site. Our case provided a similar picture with a single enlarged node which on biopsy to our surprise revealed adenocarcinoma of prostate.

**Keywords:** Neoplasm; Prostate, Neck; Lymph node; Metastasis

**Citation:** Iftikhar H, Ikram M, Usman M, Ghaloo SK. Prostate cancer metastasis to cervical node chain-an unusual clinic-pathological finding. J Ayub Med Coll Abbottabad 2019;31(1):134-5.

**INTRODUCTION**

The cervical lymph nodes are a common site for metastasis of cancers of head and neck. There are approximately 300 lymph nodes in the cervical region draining the head and neck region.<sup>1</sup> Prostate carcinoma is the most common non-cutaneous malignancy in men and the 3rd most common cause of cancer associated mortality.<sup>2</sup> It is commonly seen between the ages of 60-74 with its peak incidence around the age of 65 years.<sup>2,3</sup> Adenocarcinoma of prostate occasionally metastasizes to cervical lymph nodes, with reported incidence ranging from 0.29-0.4.<sup>4,5</sup>

Cervical lymph node metastasis might be a first sign of malignancy. It warrants a full spectrum of diagnostics test including panendoscopy under general. Metastasis from other organs of the body may be a possibility but is rare.

**CASE REPORT**

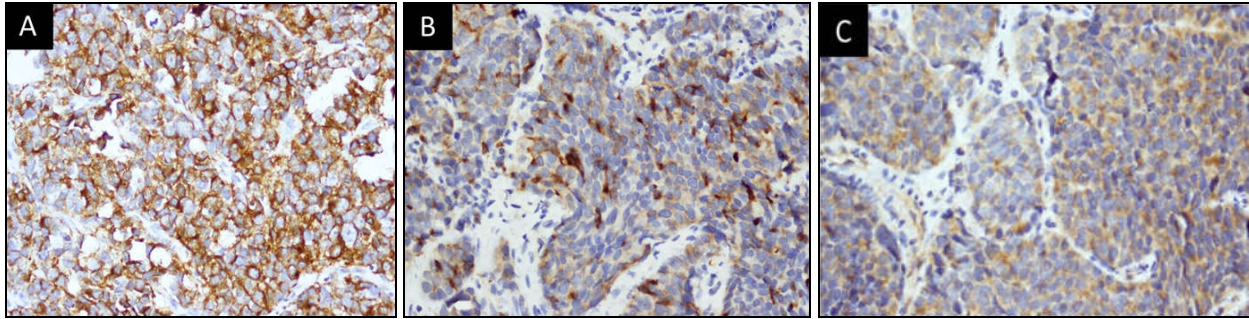
A 66-year male, diabetic and hypertensive presented to the urology clinic with lower urinary tract symptoms for one month which had progressively worsened. On examination, patient had bilateral inguinal lymphadenopathy and a node at the left supraclavicular region. Digital rectal examination (DRE) revealed a moderately enlarged prostate with irregular surface and hard consistency. Prostate specific antigen was 41.6. Staged as T2cN1Mx. CT scan abdomen, pelvis and chest was advised which revealed widespread inguinal, para-aortic and mediastinal lymphadenopathy with lymph nodes measuring around one cm and no contrast enhancement seen

in the prostate. CT-scan also revealed a relative decreased enhancement of left kidney with mild hydronephrosis and hydro ureter likely secondary to entrapment of ureter by lymphadenopathy. A left supraclavicular lymph node of the size 1.58 cm was also picked up on the scan (Figure-1). Bone scan revealed multiple abnormal increase tracer deposit over sacroiliac joint, left acetabulum, left head of femur and transverse process of T1 vertebrae. Left supraclavicular node was biopsied which revealed metastatic adenocarcinoma of prostate with complete effacement of nodal architecture by metastatic tumour arranged in sheets, nests and aggregates. (Figure-2)

Patient was diagnosed with infiltrating Adenocarcinoma of prostate, Gleason's major 5, minor 5, Gleason's sum 5+5=10/10 after transurethral resection of prostate. TNM stage T2cN1M2b. Patient denied surgical intervention and was referred for palliative radio and chemotherapy.



**Figure-1: Left supraclavicular lymph node measuring around 1.58cm.**



**Figure-2A:** Lymph node architecture is completely effaced by nests of metastatic tumour. Only a thin fibrous capsule (star) at the periphery is left as an evidence of lymph node. (H&E 100x magnification).

**Figure-2B:** Tumour nests showing occasional lumen formation. Tumour cells have granular (stippled) chromatin and show frequent mitotic figures (small arrow head). (H&E 400x magnification).

**Figure-2C:** Tumour cells showing diffuse strong positive expression for Cytokeratin CAM5.2 (A), focal strong positive expression for PSA (B) and focal positive expression for Chromogranin A IHC stains (C). (400x magnification).

## DISCUSSION

Prostate cancer is the third most common cause of cancer related deaths in males following lung cancer and accounts for 14% of all male deaths.<sup>2,5</sup> Most common variant is adenocarcinoma and makes up to 95% of all the cases of prostate cancer.<sup>6</sup> Adenocarcinoma of prostate metastasis to regional and para-aortic lymph nodes and is postulated to spread to bones hematogenously via the Batson's plexus.<sup>7</sup>

There are over 300 lymph nodes in the cervical chain and make up to 1/3<sup>rd</sup> of all the lymph nodes of the body.<sup>1</sup> Most common metastasis to the cervical chain is from the head and neck region of the squamous cell type the remaining metastatic cancers are from the non-mucosal glands such as the skin, thyroid and the salivary glands. A study found 5 cases out of 1367 patients autopsied to have metastatic prostate carcinoma in cervical lymph nodes.<sup>8</sup> Another study reported a high prevalence of latent carcinoma of prostate and showed up to 1/3<sup>rd</sup> of the cases of autopsies to have carcinoma of prostate.<sup>9</sup> Therefore, some authors suggest work-up for prostate cancer in patients with supraclavicular lymph node metastasis.

The management of metastatic prostate cancer is not of focused in this report however, its treatment requires excision of the gland. The clinical presence of supraclavicular lymph node indicates a stage IV disease with a 5-year survival of 30%.<sup>2,10</sup> The mean survival is 30 months for metastatic prostate cancer. Prolonged survival is reported with appropriate and timely diagnosis and treatment of metastatic adenocarcinoma of prostate to head and neck.

## CONCLUSION

The lymph nodes dissected should undergo immunobiological staining for a possible metastasis of adenocarcinoma of prostate. Prostate cancer should also be ruled out in patients with supraclavicular lymphadenopathy over 45 years of age.<sup>6</sup>

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Submitted: 1 March, 2017

Revised: 26 October, 2018

Accepted: 25 November, 2018

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