



## Case Report

# Virchow's Node: A Look Beyond Gut Carcinoma

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### ABSTRACT

Virchow's node, left supraclavicular lymph node contains metastases of many thoracic and abdominal visceral malignancies such as lung, breast, esophageal, gastric, pancreatic cancers. Metastasis to non-regional lymph nodes especially cervical lymph nodes is extremely rare presentation as in this case.

A middle aged male on examination found left supraclavicular lymphnodes enlargement and subjected for FNAC. On microscopy the features were suggested of metastatic urothelial deposits & confirmed by histopathology.

As this is a rare metastatic presentation at this lymph node, one should keep in mind this as a differential diagnosis for supraclavicular lymph node enlargement.

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## Introduction

Virchow's node, left supraclavicular lymph node contains metastases of many thoracic and abdominal visceral malignancies such as lung, breast, esophageal, gastric, pancreatic, gynecologic, and prostate cancers<sup>2</sup>. Urothelial carcinoma accounts for 90% of cases of bladder cancer with metastases usually limited to the regional pelvic nodes<sup>4</sup>. Metastasis to non-regional lymph nodes especially cervical lymph nodes is extremely rare presentation<sup>1</sup>. Only few reports have been published so far and with poor prognosis<sup>1</sup>. Though distant lymph node involvement is rare but cannot be entirely overlooked.

## Case report

A 40 year old male presented with history of fever, intermittent hematuria and burning micturition since one week. Incidentally left supraclavicular lymph node was found to be enlarged. Patient was subjected for FNAC.

## Results

FNAC showed cellular smears consisting of atypical epithelial cells in papillary fragments, monolayered sheets and loose clusters with both squamous and glandular differentiation. These cells showed stratification of the nuclei within the fragments. Cells with eccentrically placed nucleus, spindle cells, racquet like cells, pyramidal cells, atypical stripped nuclei were also seen. It was diagnosed as metastasis of Urothelial carcinoma (Fig.1 and Fig.2).

Patient was subjected to further relevant investigations. CT scan showed well defined enhancing mass lesion in the bladder measuring 4.5×4.8 cm arising from anterior wall with intraluminal extension. Hypodense lesions in both lobes of liver and right iliac fossa seen suggestive of metastases. Biopsy of the bladder mass was done which

revealed primary tumor to be Urothelial carcinoma. (Fig.3) Supraclavicular lymph node metastases are rare in this case and indicate widespread disease with poor prognosis.

## Discussion

Bladder cancer is the most common malignant disease of the urinary tract<sup>4</sup>. It is commonly a disease of older age and is more prevalent among men than women<sup>4</sup>. It is the 2<sup>nd</sup> most prevalent cancer for men and 10<sup>th</sup> most prevalent cancer for women<sup>3</sup>. It has variable metastatic potential and almost any organ can be involved. Data on its metastatic pattern are limited.<sup>4</sup> The pattern of recurrence and metastases are not dependent on the features of the primary tumor<sup>3</sup>.

Common sites of metastatic spread of bladder carcinoma are regional lymph nodes (90%), liver (47%), lung (45%), bone (32%), peritoneum (19%), pleura (16%), kidney (14%), adrenal gland (14%), and the intestine (13%)<sup>2</sup>. The most common lymph nodes involved are external, internal iliac and obturator (20%-45%) as the primary lymphatic drainage of the bladder and the common iliac sites as the secondary drainage<sup>1</sup>.

The possible route of spread to head and neck region is by haematogenous through vertebral veins and by lymphatics<sup>1</sup>. Presence of Virchow's node with muscle invasive bladder tumour is considered as incurable metastatic disease as the pathological retrograde tumour cell deposition against the normal drainage of the node (towards the thoracic duct) imply extensive tumour occupation of the retro peritoneum.

Study done by Hessian *et al.* among 207 patients with metastasis to the head and neck area lymph nodes showed only 3 cases having metastasis Urothelial in origin<sup>5</sup>. Ferlito *et al* reported a series of genitourinary tumors and found this group to be the third most

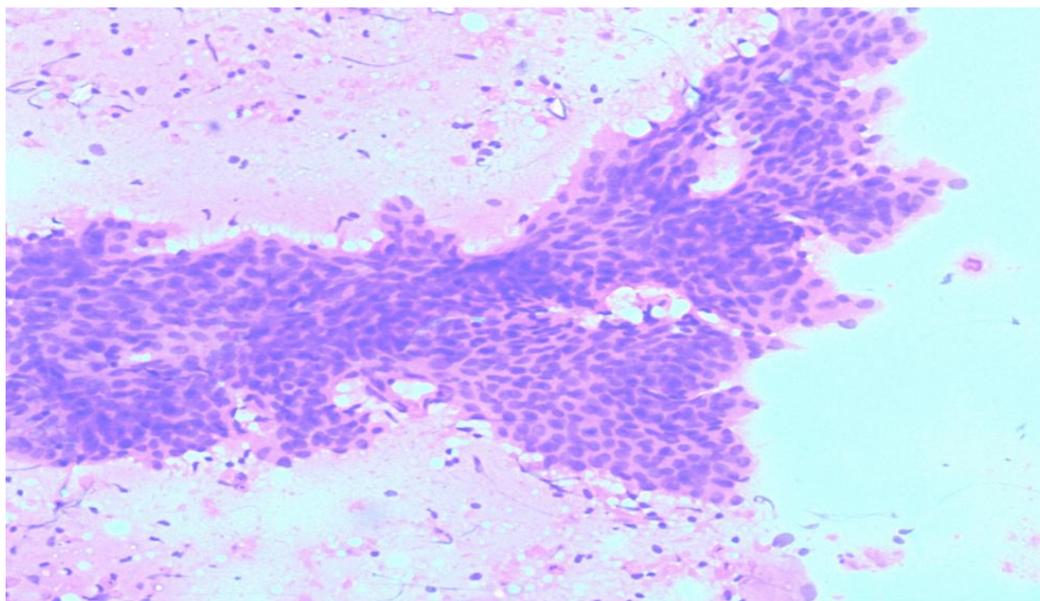
frequent tumor site to metastasize to the supraclavicular fossa<sup>3</sup>.

### Conclusion

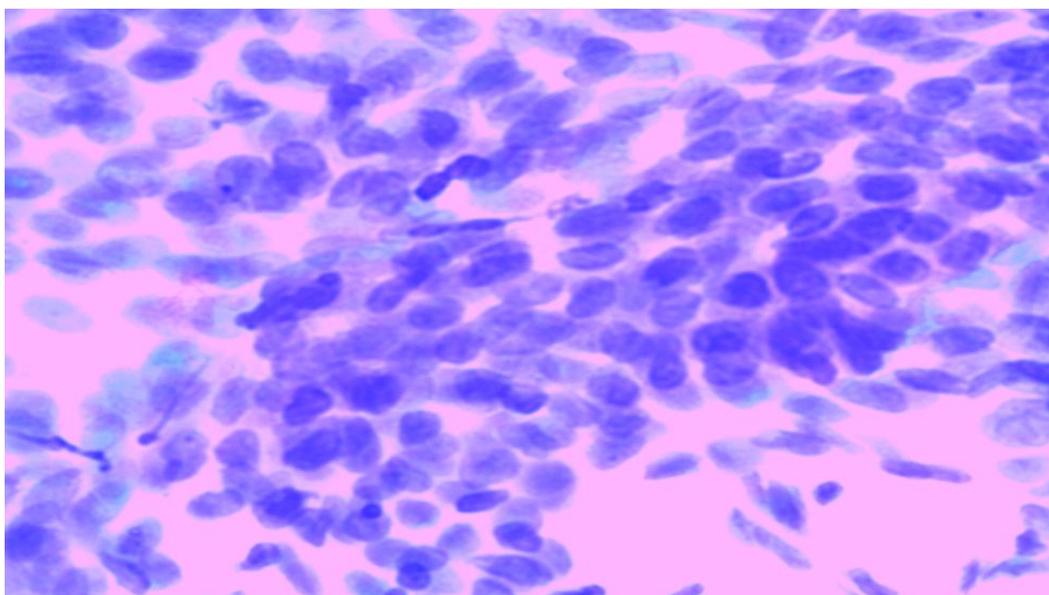
This case is a rare presentation of Urothelial carcinoma metastases to Virchow's node. Identification of nodal involvement is important because the presence of nodal metastasis advances the disease to stage IV<sup>4</sup>. Picking up nodal metastases may influence therapeutic decisions and FNAC can be used as first line investigation in diagnosing such metastases with certainty.

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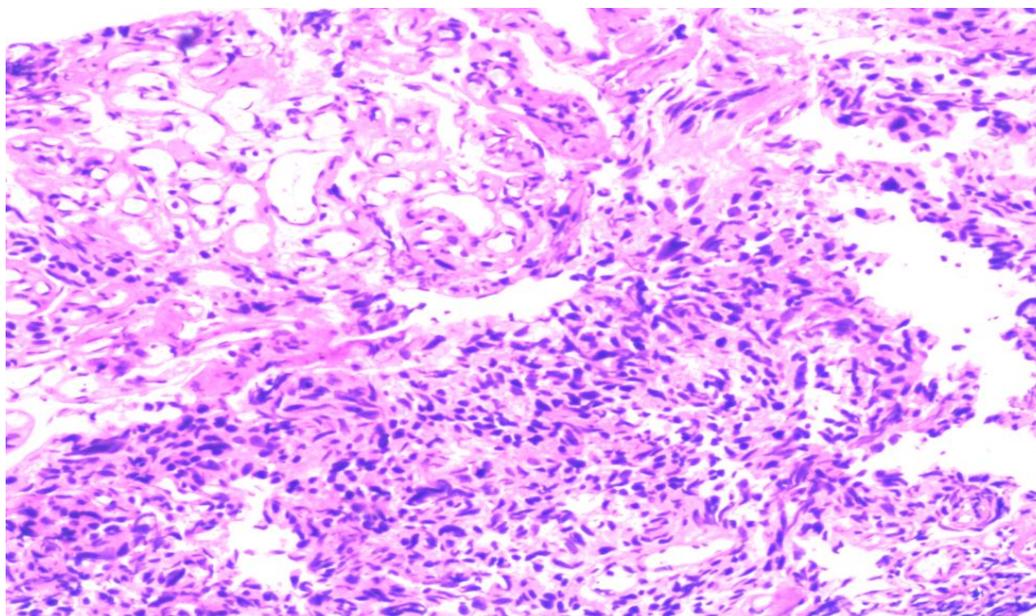
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**Figure 1.** FNAC showing atypical epithelial cells arranged in papillary fragments(H&E 10x)



**Figure 2.** Cluster of pleomorphic cells showing nuclear overlapping with coarse chromatin (H&E 45x)



**Figure 3.** Atypical tumor cells in varied pattern diagnosed as urothelial carcinoma (H&E 40x)