

Case Report

Virchow's node: A look beyond gut carcinoma

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Abstract Virchow's node, left supraclavicular lymph node contains metastasis of many abdominal visceral malignancies. Urothelial carcinoma comprises 90% of all primary bladder cancer with metastases usually limited to the pelvic nodes. Though distant lymph node involvement is rare but cannot be entirely overlooked. Presence of Virchow's node with bladder tumor is considered as incurable metastatic disease. 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. FNAC showed the features of urothelial carcinoma. Patient was subjected to further relevant investigations. CT-Scan showed well defined enhancing lesion with intra-luminal extension. Biopsy was done which revealed primary tumor to be urothelial carcinoma of bladder. Supraclavicular lymph node metastases are rare in this case and indicate widespread disease with poor prognosis. Conclusion: This case is a rare presentation of urothelial carcinoma metastases to Virchow's node. Picking up nodal metastases may influence therapeutic decisions and FNAC may be a useful tool in diagnosing such metastases with certainty.

Keywords: Virchow's node, urothelial carcinoma, FNAC, metastases

Introduction

Virchow's node (left supraclavicular lymph node) may contain metastases of many thoracic and abdominal visceral malignancies such as lung, breast, esophageal, gastric, pancreatic, gynecologic, and prostate cancers [1]. Urothelial carcinoma accounts for 90% of cases of bladder cancer with metastases usually limited to the regional pelvic nodes [2]. Metastasis to non-regional lymph nodes especially cervical lymph nodes is extremely rare presentation [3]. Only few reports have been published so far and with poor prognosis [3]. 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 fine needle aspiration cytology (FNAC). Cytology 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, and 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 were 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 [2]. It is commonly a disease of older age and is more prevalent among men than women [2]. It is the second most prevalent cancer for men and 10th most prevalent cancer for women [4]. It has variable metastatic potential and almost any organ can be involved. Data on its metastatic pattern are limited [2]. The pattern of recurrence and metastases are not dependent on the features of the primary tumor [5].

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%) [1]. Most common lymph nodes involved are external iliac, internal iliac and obturator (20%-45%) as the primary lymphatic drainage of the bladder, and the common iliac sites as the secondary drainage [3].

The possible route of spread to head and neck region is by haematogenous route through vertebral veins and by lymphatic route [3]. The presence of Virchow's node with

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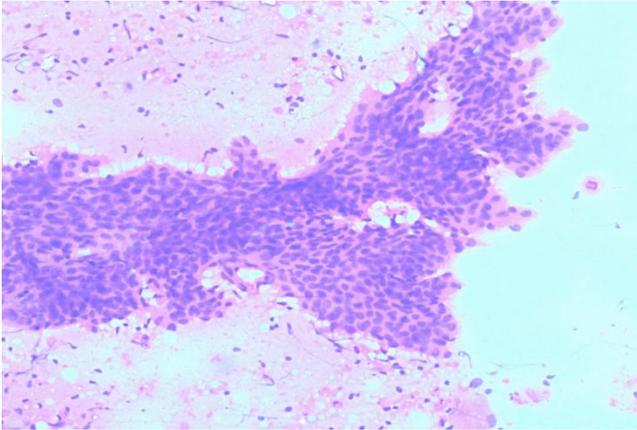


Figure 1 FNAC showing atypical epithelial cells arranged in papillary fragments (Hematoxylin and eosin stain 10x)

muscle by haematogenous through vertebral veins and by lymphatics [3]. Presence of Virchow's node with muscle invasive bladder tumor 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 with urothelial origin [5]. 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 [4].

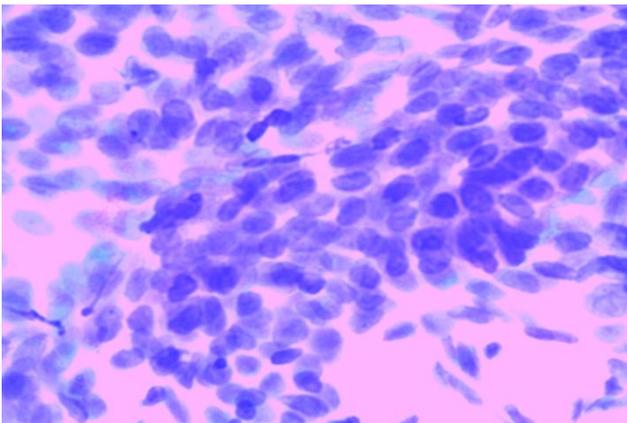


Figure 2 Cluster of pleomorphic cells showing nuclear overlapping with coarse chromatin (H&E 45x)

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 [2]. Picking up

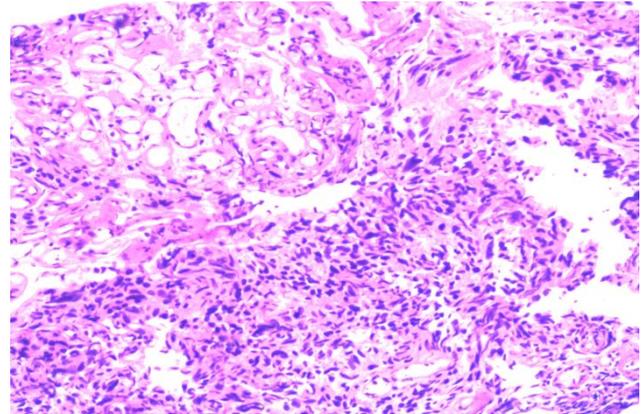


Figure 3 Atypical tumor cells in varied pattern diagnosed as urothelial carcinoma (H&E 40x)

nodal metastases may influence therapeutic decisions and FNAC can be used as first line investigation in diagnosing such metastases with certainty.

Conflict of Interest

The authors declare no conflicts of interest.

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