

## VIRCHOW'S NODE

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### Introduction

Virchow's node is an enlarged, hard, left supraclavicular lymph node, which contain metastasis of a range of thoracic or abdominal visceral malignancy. It was initially named after Rudolf Virchow (1821-1902). The presence of an enlarged Virchow's node is referred to as Troisier's sign, named after Charles Emile Troisier.

### Case 1

56-year old smoker with a history of transurethral resection of a bladder tumour (TURBT) for muscle invasive (T2) tumour who defaulted presented with Virchow's node. Imaging showed a large, well-enhanced, broad-based tumor of the left bladder wall and diffuse enlargement of the pelvic and para aortic lymph nodes (Figure 1).



**Figure 1.** CT Scan of the pelvis coronal section – large muscle invasive tumour (T) almost completely occupying the bladder but sparing the rectum (R).

### Case 2

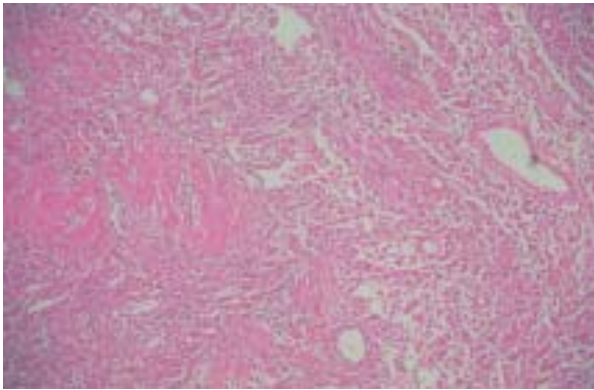
A 58-year old non-smoker presented with intermittent gross painless haematuria and a Virchow's node of a few weeks duration (Figure 2). Imaging revealed a large bladder calculus with a high volume bladder tumour with unilateral hydronephrosis. Histology confirmed high grade transitional cell carcinoma (TCC) with squamous metaplasia.



**Figure 2.** Left supraclavicular lymph node enlargement.

### Case 3

A 61-year old man, who underwent TURBT for high grade superficial tumour presented with a large Virchow's node after two months. Subsequent histology confirmed high grade TCC with neuroendocrine differentiation (Figure 3).



**Figure 3.** Histology of a muscle invasive carcinoma of the bladder with neuroendocrine cells (H & E  $\times$  100).

### Discussion

Troisier's sign is an oncologically ominous clinical entity. The majority of such nodes are due to primary malignancies of lung (22% cases), breast (16.4% cases), cervix (11% cases) stomach (10%) and oesophagus (8.6% cases). In 13.3% cases the primary site is unknown (1). There are no reported antemortum studies of bladder tumour deposits in the supraclavicular nodes.

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%) (2).

In a large autopsy study (Smith et al) showed a differential lymph node metastasis in obturator 74%, external iliac 65%, hypogastric 17%, Perivesical 16%, common iliac 19%. Yet the incidence of Virchow's node was not mentioned (6).

High grade TCC has poor outcome. Presence of squamous metaplasia or neuroendocrine differentiation makes tumour more aggressive resulting in poorer prognosis (3, 5).

Presence of Virchow's node with T2 bladder tumour is considered as incurable metastatic disease.

A multi-institutional review has indicated that neither chemotherapy, nor radiation, nor surgery has any impact on overall survival. Significant progress has been made in the systemic chemotherapy with 4-drug regimen consisting of methotrexate, vinblastine, adriamycin, and cisplatin (MVAC). This has been the standard treatment regimen for approximately 10 years with response rates ranging up to 60% (3). The benefits of MVAC appeared to have plateaued, and many patients with advanced disease are not candidates for therapy as a result of preexisting cardiac and renal disease.

This regimen has been challenged with newer drug combination which includes taxenes, gemcitabine, cisplatin and etoposide (4). When cisplatin is contraindicated, administration of cyclophosphamide, doxorubicin and etoposide is an option (5).

However, many of the patients have significant comorbidity and are unfit for systemic chemotherapy by the time Virchow's node is apparent which leaves them with terminal care.

### References

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