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Case Report

Solitary Cervical Lymphadenopathy: A Rare Presentation of Renal Cell Carcinoma.

Singh K[1*], Singh V[2], Sinha RJ[3], Jhawar A[1], Gupta AK[1], Singh S[1], Prakash G[1]

[1]Senior Resident, [2]Professor, [3]AssociateProfessor, Department of Urology,
King George Medical University, Lucknow, Uttar Pradesh, INDIA.

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***Correspondence to:**
Dr Kawaljit Singh
Senior Resident
Department of Urology.
KGMU, Lucknow,
Uttar Pradesh, India.
kskaura@gmail.com

ABSTRACT

Renal Cell Cancer, considered as the most fatal cancer of urinary tract is most frequently diagnosed as an incidental finding. Very few cases in literature are noted to present with cervical lymph node enlargement especially solitary. We report a rare case of left renal cell carcinoma in a young female, presenting with left cervical lymphadenopathy. Fine needle aspiration cytology was suspicious of papilloid epithelial malignancy and further work up with contrast enhanced computed tomography scan revealed left renal mass with few left paraortic lymph node involvement, for which radical nephrectomy with lymph node sampling was done. The final histopathology was consistent with papillary renal cell carcinoma with regional lymph node involvement. Patient was given injection temsirolimus (as per National Comprehensive Cancer Network guidelines) but within one year she had local recurrence and developed multiple metastasis liver metastasis, thus depicting aggressive behaviour of the tumor.

KEYWORDS: Cervical lymphadenopathy, Head and neck metastasis, m-TOR inhibitors, Radical nephrectomy, Renal cell carcinoma.

INTRODUCTION

Renal cell carcinoma comprises 2% of all the malignant cancers of the body and is twice more common in males. About 25-30% patients present with metastases at initial presentation. The most common site of metastasis is lung followed by bone, liver and brain. Usually head and neck region is uncommon site of metastasis but if present, the most common symptoms include nasal obstruction, epistaxis, orbital swelling, scalp swelling or facial tenderness.[1] Previous reviews of renal cell carcinoma metastasis to the head and neck are rare. Thus solitary cervical metastatic lymph node enlargement is an uncommon presentation of renal cell carcinoma and should be considered in the differential diagnosis of any growing lesion in the head and neck region.

CASE REPORT

A 27 year young lady presented with complaints of swelling left side of neck and fever (not relieved with medication) for one month. General physical examination was insignificant. Tuberculosis work up was negative. Clinical examination revealed pallor with enlarged single left cervical lymph node (2 X 1.5cm), firm in consistency. Renal function test were normal and urine culture was sterile. Fine needle aspiration cytology of cervical lymph node revealed papillary epithelial cell neoplasm suggesting the possibility of renal cell carcinoma (Figure 1). Cytopathology picture prompted further work up with ultrasonography of kidney, ureter and bladder (KUB), which revealed about 7X6 cm, hypoechoic mass in the lower pole of left kidney. Contrast enhanced computed tomography scan of abdomen showed - a well-defined solid cystic enhancing lesion with areas of hemorrhage and calcification (7.8X6.9X7.0 cm) involving the pelvis and lower pole of left kidney, abutting adjacent bowel loops with a small suspicious lesion in liver and few sub centimetric lymph nodes in the para-aortic region (Figure 2). Since the small lesion in liver was only suspicious and liver function tests were normal, patient was taken up for left radical nephrectomy. Intraoperatively, few enlarged paraortic lymph nodes were encountered which were sampled. Histopathology of the resected specimen showed left renal carcinoma (papillary variant) with ureteric margins and pelvis free from tumour invasion and sampled paraortic lymph node specimen showing the presence of tumour invasion (Figure 3). In view of the small suspicious lesion in liver and presence of tumour invasion in sampled lymph node, Patient was given injection Temsirolimus 25 mg infused intravenously over 30-60 minute period once a week for 6 weeks (National Comprehensive Cancer Network guidelines). Patient tolerated targeted therapy well but lost follow up and reported after 1 year with generalized weakness and malaise. Contrast enhanced computed tomography scan was repeated which showed a heterogeneously enhancing soft tissue attenuating lesion

(4X2X1.8cm) in left renal fossa (suggestive of recurrence) along with another ill-defined heterogeneously enhancing soft tissue attenuating lesion (4.5X3.1X3cm) in the paraortic and prevertebral region encasing and anteriorly displacing aorta with multiple well defined non enhancing hypodense lesions in both lobes of liver and gall bladder (segments 2,5,6,7,8) with largest measuring 2.5X2 cm (suggestive of metastasis) (Figure 4). Patient again lost follow up and repeated attempts of contacting her proved futile.

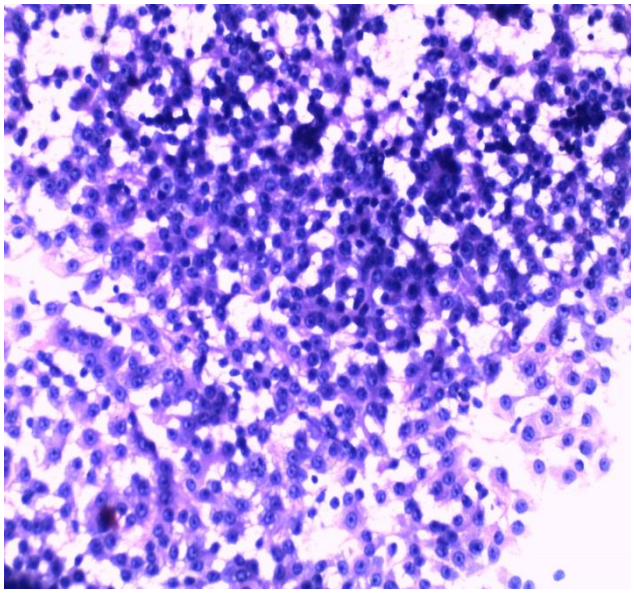

Figure 1 - (Haematoxylin & Eosin , X 40) - FNAC smear showing mild pleomorphic tumour cells arranged in clusters with prominent nucleoli with moderate amount of cytoplasm (papilloid pattern).

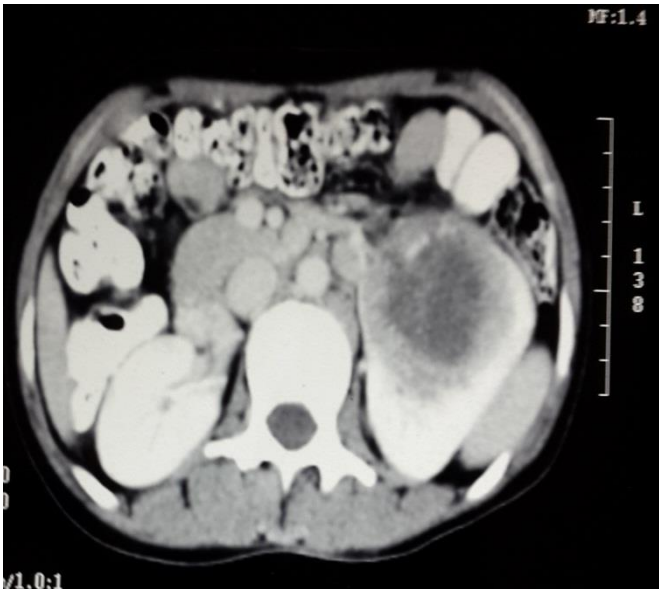

Figure 2 - Contrast enhanced computed tomography scan showing contrast enhancing left lower pole kidney mass with small para- aortic lymph nodes.

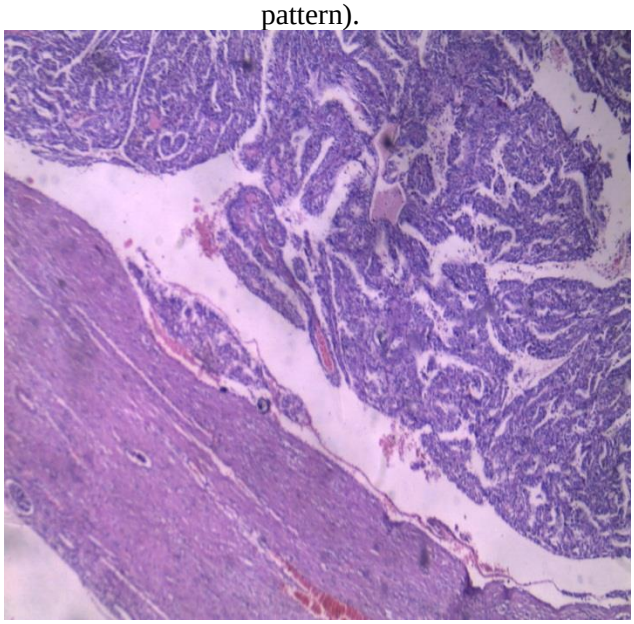

Figure 3 - (Haematoxylin & Eosin, X 4) - section from renal tumour shows papilloid pattern of tumor with normal renal parenchyma in the periphery.

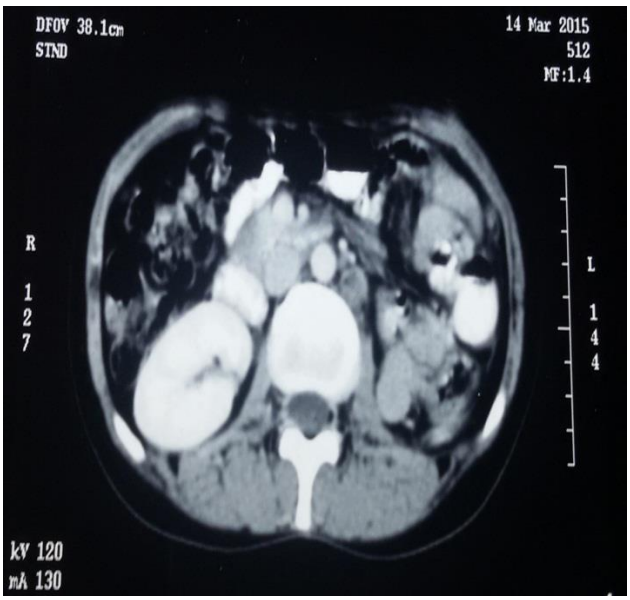

Figure 4 - Post nephrectomy contrast enhanced tomography scan showing recurrence of growth in left renal fossa.

DISCUSSION

Renal cell carcinoma constitute 2 out of every 100 cases of malignant tumors reported adults with metastasis to head and neck region being reported in 14.3% patients and 8% patients presenting with exclusive head and neck metastasis.[2] Isolated cervical lymph node enlargement is rarely reported.[3] In the head and neck region, most common site of metastasis of renal cell carcinoma is thyroid gland followed by cervical lymph nodes.[4] The probable route of metastasis to head and neck region is by haematogenous route and by retrograde flow through the costal and/or mediastinal lymph vessels.[5] Thus, whenever metastasis in head and neck is found, a primary tumor of the kidney must be suspected. In this case the fine needle aspiration cytology of cervical lymph node was suggestive of renal cell carcinoma. However the final histopathology of the specimen was

suggestive of papillary variant of renal cell carcinoma. Similar case was reported by Behnes CL[6] in which a young woman with hereditary leiomyomatosis with metastasized papillary renal cell carcinoma was primarily diagnosed with cervical lymph node enlargement. Due to the lack of availability of immuno-histochemistry in our institute, we could not perform the detailed genetic analysis and sub typing of this papillary cell carcinoma. Literature suggests that solitary metastatic renal cell carcinoma may generally be surgically resected with 5-year survival rates of 30% to 60%.[7] In general, the chemotherapy or radiation therapy is ineffective in renal cell carcinoma but immunotherapy (recombinant human interleukin-2 and interferon-alpha) has been developed as new modality with overall response rate of 15%– 20%.[8] Temsirolimus (m-TOR inhibitor) is the preferred drug for papillary variant of renal cell carcinoma with median overall survival of 11.6 months (National Comprehensive Cancer Network guidelines - category 1 recommendation).[9] The local recurrence of renal cell carcinoma after radical nephrectomy, occurs in 2% to 4% of cases with risk factors including locally advanced or node-positive disease and adverse histopathologic features and the majority of patients with local recurrence also have systemic disease.[10] Based on these findings only, temsirolimus therapy was started. Majority of the available data on metastatic renal cell carcinoma management is available only for clear cell carcinoma. There is paucity of literature on management of non-clear cell carcinoma with metastasis. Thus this case report highlight the uncommon presentation of papillary renal cell carcinoma and hence the need to develop consensus regarding management of such atypical cases.

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