Case Report

Renal cell carcinoma: Atypical metastasis to inguinal lymph nodes

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Abstract

Renal cell carcinoma (RCC) is a common tumor of the urinary tract. It is known to have variable presentations due to the extremely vascular nature of the organ. RCC are known to metastasize to lungs, bone, and brain commonly but atypical metastasis to various sites are reported in literature but as very rare pathology. We report a case of a 60-year-old female who presented with multiple inguinal and axillary lymph node enlargements which on excision biopsy showed metastatic RCC. RCC can present with synchronous metastatic deposits in the various organs. RCC can metastasize to some atypical sites as well such as thyroid, orbit, and neck as mentioned earlier in literature. The patient presenting with extra-regional lymph nodes like inguinal and axillary is extremely rare, and so far only one clinical case could be found from India in 2008. A 61-year-old female presented in the emergency department with left flank pain and hematuria. Imaging showed left swollen kidney but multiple lymph nodes in retroperitoneum, left inguinal and axillary region. Excisional biopsy confirmed metastatic renal clear cell carcinoma. The case was referred to an oncologist after left radical nephrectomy for further treatment. Renal cancer is quite common aggressive disease. Due to its vascular nature, it may present quite atypically as evident from literature. Although treatment of metastatic carcinoma is still controversial surgery is the mainstay of treatment and guidelines consider metastasectomy and cytoreductive nephrectomy as valid option followed by targeted systemic therapies. RCC has quite a high potential to metastasize in the versatile pattern, in our case, it is evident that valid management is still surgery but needs support from the multidisciplinary team.

Key Words: Metastases, metastatectomy, renal cell carcinoma

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INTRODUCTION

Renal cell carcinoma (RCC) is the most lethal urological malignancy with aggressive behavior and a propensity for metastatic spread. Clear cell is the most frequent histological variant and represents 60% cases in patients between 50 and 70 years of age.[1] Its aggressive behavior is due to its potential for metastatic spread and 30% cases are metastatic at the time of presentation.[2]

The classic presentation is as triad of flank pain, mass, and hematuria but with advances of recent imaging modalities, lot

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of cases nowadays are asymptomatic and termed as incidental cases. RCC metastasize early because of its vascular nature and mainly through lymphatic drainage. Common metastatic sites are lungs (75%), bones (20%), liver (18%), and brain (8%), but virtually all organs can be affected.[3]

CASE REPORT

A 61-year-old female who is known the case of diabetes mellitus and hypertension presented to urology outpatient department with a history of the left flank pain and painful hematuria. On the examination, she was vitally stable, and abdomen was soft and nontender. The emergency department advised noncontrast computed tomography (CT) scan kidneys, ureters, bladder, and follow-up from urology clinic to rule out stone disease as the prevalence of stone disease in the Middle East is extremely high. Noncontrast CT showed no stone but showed left swollen kidney with hyperdense area in upper pole with multiple para aortic nodes and inguinal lymph nodes. Urology team reviewed patient; nodes were found palpable in left axilla too. The patient was advised CT abdomen and pelvis with contrast and findings were left upper pole 5 cm × 4.5 cm area with central necrosis, irregular contrast enhancement, perinephric, proximal left peri-ureteric, bulky lower aspect of the left adrenal gland, para-aortic, aortocaval, left axillary 29 mm, left iliac, and left inguinal 24 mm lymph nodes [Figures 1-3].

Simultaneously breast carcinoma work up was also carried out to look and found negative patient was referred to general surgery for excisional biopsy of axillary and inguinal lymph nodes to find out primary source of malignancy. Histopathology result was poorly differentiated carcinoma. Immunochemistry was found positive for Vimentin, CD10, CKAE1/AE3 so conclusion was strongly suggestive for metastatic clear cell carcinoma of renal origin, Fuhrman Grade 4. The patient underwent left radical nephrectomy within a week. Histopathology results were clear cell with sarcomatoid features RCC – pT4NxM1G4. The case was discussed in multidisciplinary tumor board, and the patient was referred to oncologist for further management. Her CT chest was found negative, and she was started on tyrosine kinase inhibitors – pazopanib but after 6 months patient had developed acute renal failure because of urosepsis and pneumonitis most probably drug-induced as per recent CT and under treatment for these acute conditions.

DISCUSSION

Thirty percent cases of RCC are metastatic at the time of presentation. Most common sites are lungs, bone, liver, and brain and atypical sites so far mentioned in literature till now also include head and neck, sinuses, thyroid, skin, testis, orbit, and heart.[4] Extra-regional lymph node involvement is extremely rare.

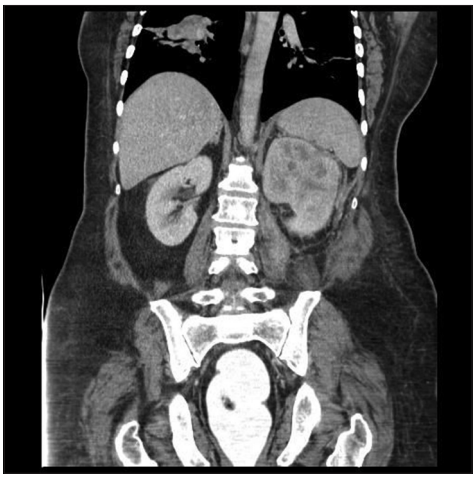

Figure 1: Left renal upper pole enhancement

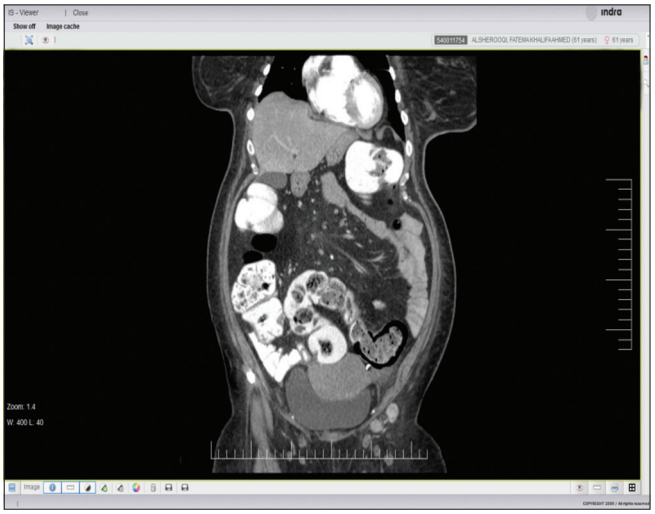

Figure 2: Left inguinal lymph nodes

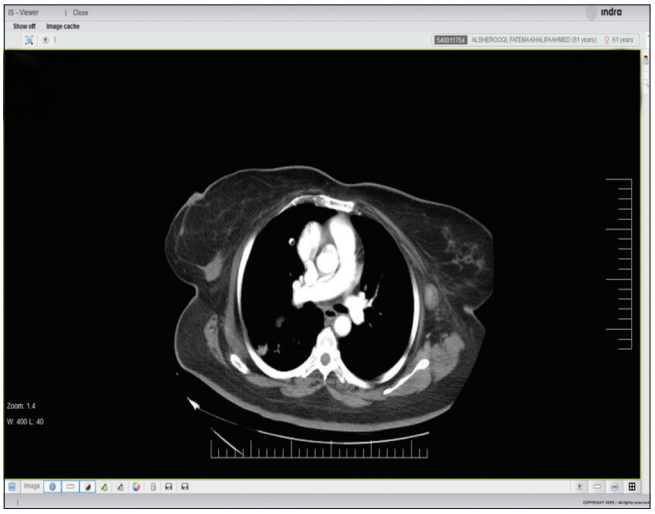

Figure 3: Left axillary lymph node

Metastatic carcinoma to inguinal nodes can be from various primary sites. Zaren and Copeland.[5] found in a retrospective

study of 2232 cases that most common site is from skin of lower extremity followed by rectum, ovary, and penis. They found 13 cases were from renal origin. Saitoh *et al.*[6] found from autopsy records of 1828 cases that common lymph nodes involved in case of RCC were at renal hilum but they also noticed very uncommon involvement of supraclavicular, cervical, axillary, and inguinal lymph nodes as well. In literature, till to date, we could find only one case presented and diagnosed with metastatic RCC in in inguinal lymph nodes.[7] Probably our case will be the second case report.

As per guidelines and various studies mainstay treatment for metastatic RCC is still surgery whether in form of palliative or cytoreductive nephrectomy with metastasectomy, if possible.[8] Poor performance status can be one of major constraint in surgical treatment. However, surgical treatment has to be followed by systemic targeted therapy. Recently, introduced targeted therapies are also problematic because of its cost and side effects and has to be taken for unlimited time.[9] Ongoing studies in phase 3 are still recruiting patients, but results are yet to be confirmed.[10]

CONCLUSION

Metastatic RCC is a lethal disease. Although rare it has the potential to metastasize at atypical sites. We being urologist need to emphasize more on clinical examination as RCC has potential to metastasize at atypical sites and tubular vision may miss important clue to diagnosis. We hope that with advent of new targeted therapies, outcome of this lethal disease will be relatively favorable in future.

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Conflicts of interest
There are no conflicts of interest.

REFERENCES

1. Staderini F, Cianchi F, Badii B, Skalamera I, Fiorenza G, Foppa C, *et al.* A unique presentation of a renal clear cell carcinoma with atypical metastases. Int J Surg Case Rep 2015;11:29-32.
2. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2015. CA Cancer J Clin 2015;65:5-29.
3. Maldazys JD, deKernion JB. Prognostic factors in metastatic renal carcinoma. J Urol 1986;136:376-9.
4. Sountoulides P, Metaxa L, Cindolo L. Atypical presentations and rare metastatic sites of renal cell carcinoma: A review of case reports. J Med Case Rep 2011;5:429.
5. Zaren HA, Copeland EM 3rd. Inguinal node metastases. Cancer 1978;41:919-23.
6. Saitoh H, Hida M, Nakamura K, Shimbo T, Shiramizu T, Satoh T. Metastatic processes and a potential indication of treatment for metastatic lesions of renal adenocarcinoma. J Urol 1982;128:916-8.
7. Manikandan R, Dorairajan LN, Kumar S, Tripathi P, Murugan P, Basu D. Renal adenocarcinoma presenting as a groin swelling: A case report. Indian J Surg 2008;70:194-6.
8. Antonelli A, Arrighi N, Corti S, Legramanti S, Zanotelli T, Cozzoli A, *et al.* Surgical treatment of atypical metastasis from renal cell carcinoma (RCC). BJU Int 2012;110(11 Pt B):E559-63.
9. Karam JA, Rini BI, Varella L, Garcia JA, Dreicer R, Choueiri TK, *et al.* Metastasectomy after targeted therapy in patients with advanced renal cell carcinoma. J Urol 2011;185:439-44.
10. Krabbe LM, Haddad AQ, Westerman ME, Margulis V. Surgical management of metastatic renal cell carcinoma in the era of targeted therapies. World J Urol 2014;32:615-22.