

Cutaneous Metastasis to the Left Cheek as the First Symptom of RCC

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Abstract

Renal Cell Carcinoma (RCC) is the third most common genitourinary malignancy with an estimated one third of cases with metastatic disease at the time of diagnosis. RCC metastasizes most commonly to the lung parenchyma, bone, liver, and brain and less commonly to the thyroid, pancreas, muscle, soft tissue and skin. The incidence of cutaneous metastasis from all urologic malignancies has been reported to be 0.73-1.3%. Though rare, cutaneous metastasis from RCC is more frequent than any other genitourinary malignancy. Unfortunately, the prognosis of metastatic Renal Cell Carcinoma (RCC) with skin metastasis is in most cases unfavourable. We report an unusual case of cutaneous metastasis to the left cheek, in a 56-year-old man, as the first symptom of renal cell carcinoma.

Keywords: Cutaneous metastasis; Renal cell carcinoma; Surgical treatment

Introduction

Renal cell carcinoma (RCC) accounts for 2-3% of all solid cancers. It usually occurs between fifth and seventh decades of life and is twice as common in males [1]. Most cases of RCC do not cause symptoms until they are advanced, in fact, up to 40% of renal masses are found incidentally and approximately 25% of patients with RCC have metastasis at initial presentation [2]. The most common sites for RCC metastases are as follows: lungs, lymph nodes, bones, liver, brain and adrenal glands [3]. There are some unique cases of RCC metastasis such as bulbi oculi or nail [4,5]. Cutaneous metastases in renal cell carcinoma are extremely rare, seen only in 1-3% of the cases, and are associated with worse prognosis [6]. We describe a patient with RCC who had cutaneous metastasis as initial presenting feature. Unusual localisation of RCC metastasis convinced us to publish our patient's case. In literature available to us, we did not find any other work examining skin metastasis as an initial symptom of renal cell carcinoma disease, which makes our case even more unique.

Case Presentation

A 56-year-old man presented to the general surgical service with a lesion on the left cheek, which was slowly increasing in size (Figure 1). There was a 10mm x 5mm mass of firm consistency,

bluish-red in colour, which occasionally bled on minimal trauma whilst shaving. There were no other abnormalities on examination. The patient had no history of any specific disease or trauma. He was not taking any anticoagulants, steroids or other medicines.



Figure 1: Skin tumor.

The lesion was excised under local anaesthetic by a general surgeon and closed primarily. Histopathological examination showed a clear cell tumour with morphological and immunohistochemical features of clear cell renal cell carcinoma with clear margins (Figure 2), VIM (+) (Figure 3), CD10(+) (Figure 4), CEA (-). By the time the final diagnosis was made, the patient had been admitted to the Emergency Department in a District Hospital, fol-

lowing a left loin pain and hematuria.

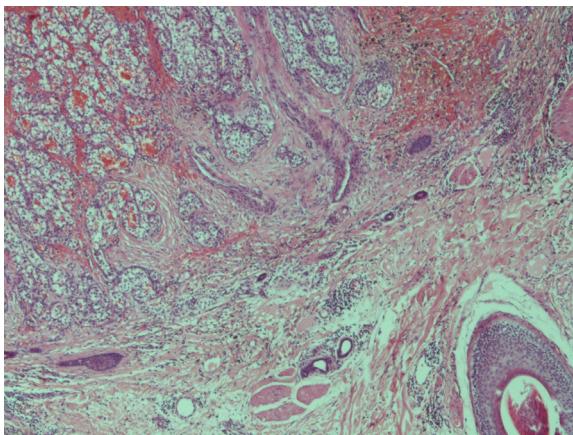


Figure 2: Histopathology of skin tumor (HE staining, x20).

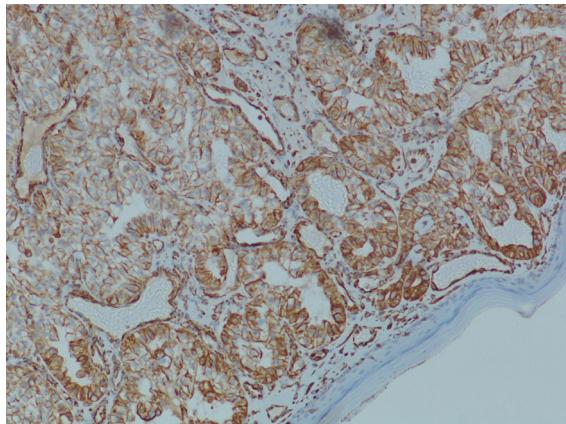


Figure 3: Histopathology of skin tumor (Vimentin, x100).

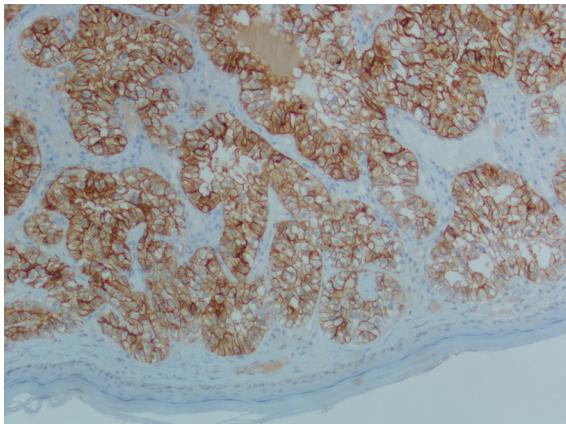


Figure 4: Histopathology of skin tumor (CD 10, x100).

The diagnostic workup for the back pain and hematuria included a computed tomography scan which showed almost 9cm incidental mass on the left kidney, numerous metastases in left

adrenal gland, single metastatic lesion in right adrenal gland, and small, multiple metastatic pulmonary lumps.

The patient underwent left radical nephrectomy. Flank incision was performed and the tumor-altered kidney was removed along with adipose capsule, Gerota's fascia, left adrenal gland, proximal part of the ureter and regional lymph nodes. Pathology studies of the mass were consistent with the 8cm RCC Fuhrman grade 3, identified grossly as a golden-yellow tumor with many necrotic lesions. The involvement of renal sinus and perinephral fat was observed. Carcinoma clarocellulare metastaticum was diagnosed in the left adrenal gland. The patient did well postoperatively and was discharged home a few days later. He was referred to an oncologist and was planned for sunitinib therapy.

Discussion

Renal cell carcinoma often metastasizes to the lungs, liver, bones, lymph nodes, contralateral kidney or adrenal glands [1]. Cutaneous metastases in renal cell carcinoma are extremely rare, seen only in 1-3% of the cases. The common sites for cutaneous metastases are chest and abdomen due to anatomic proximity to kidneys, and scalp due to lymphohematogenous spread [6]. Usually, neoplastic cells of RCC are positive for vimentin, epithelial membrane antigen, CD31, and less than 10% express CK7 or CK20, whereas CD10 is expressed in approximately 89-100% of RCC. A total of 80-90% of patients with skin metastases are patients with a prior diagnosis of renal cell carcinoma. However, 10-20% of patients are diagnosed with skin lesions before the primary lesion is identified [7]. The incidence of cutaneous metastases is lower in patients with stage I cancer (staging at the time of nephrectomy) as compared to stage III or higher. The average time for the onset of cutaneous metastases is longer in stage I, which is 51 months as compared to stage III or higher, which is 13 months [8]. Our patient had developed cutaneous metastasis even before the kidney tumor was diagnosed. The cutaneous metastasis as the first symptom of RCC is extremely rare. The mean duration of survival after the diagnosis of cutaneous metastasis is around 12 months [6].

Treatment for cutaneous metastases depends on localisation, the extent of metastases and patient's general condition. For a single, isolated cutaneous lesion, surgical removal is the treatment of choice and radiotherapy is an alternative in non-surgical patients [6]. However, most patients with cutaneous metastases have synchronous metastases in other organs, like our patient presented. Metastatic renal cell carcinoma therapy consists of surgical (radical nephrectomy) treatment and the combination of angiogenesis/multikinase inhibitors (sunitinib, sorafenib) [9]. Radical nephrectomy remains the method of choice for patients with resectable primary tumor in the setting of metastatic disease as an initial treatment. Radical nephrectomy prior to immunotherapy improves survival among patients with metastatic RCC over

immunotherapy alone, giving patient a chance to live normally, without symptoms of the disease.

Conclusions

In conclusion, cutaneous metastases from urologic malignancies are uncommon manifestations of an advanced disease. The skin, as the largest human organ, should not be omitted in diagnostic evaluation as a possible site for metastasis from a urologic malignancy. Suspicious lesions should be evaluated aggressively, in particular, a firm cutaneous nodulus should arouse suspicion of metastasis. Surgeons, clinicians, and pathologists should always keep in mind that a suspicious tumor of the skin could be the first symptom of a hidden illness, which should not be overlooked.

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